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ABSTRACT

Results of a national survey of major and minor injuries and deaths in secondary and college sports are reported. The survey covered the following topics: (1) responsibility for health services; (2) participation in athletics; (3) injuries and deaths in athletics; (4) injuries by available health care; and (5) injury rates in athletics. Results of the survey are reported in tabular form with narrative discussion. (JD)

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Athletic Injuries and Deaths in Secondary Schools and Colleges

A REPORT ON THE SURVEY MANDATED BY SECTION 826 OF PUBLIC LAW 93-380

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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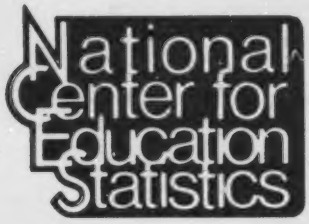

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First reprint November 1979

Foreword

Discussion in the Congress concerning methods of reducing the number of athletic injuries or minimizing their impact led to Section 826 of Public Law 93-380, which required that the Secretary of the Department of Health, Education, and Welfare gather data in this area.

Within the Department, this responsibility was assigned to the Assistant Secretary for Education and delegated to the National Center for Education Statistics (NCES). The actual survey was based upon a sample of 2,500 secondary schools and 1,300 colleges using data for the year July 1, 1975 to June 30, 1976.

As in the case of any survey of this type, a number of individuals and organizations contributed to its development and execution. Important help was received from a number of Congressional staff members, during the early stages, as NCES attempted to develop a survey plan responsive to the concerns of the sponsors of the bill which mandated it.

Within NCES, the project was directed by Robert Calvert, Jr. who was assisted by Sylvester Cain and Barbara Whalen. Help in development of the sample specifications was provided by Abraham Frankel and Charles Lauthers. The manuscript was typed by Ruth Minnis.

Other Department personnel who played significant roles included Simon McNeely and the programming staff of Ted Chmura, Frank Morgan, and John Eccles. Dr. Delano Meriwether was nominated by the Assistant Secretary for Health to work in liaison with this project.

The survey of institutions was conducted by the National Athletic Injury/Illness Reporting System (NAIRS) located at Pennsylvania State University. The director of that service, Dr. Kenneth S. Clarke, is a recognized authority in the area of sports injuries and proved an invaluable resource throughout this project.[1] The survey activities were coordinated by John Powell. Others on the NAIRS staff who contributed to the survey were Sayers Millers, Jr., June Owens, John Miller, Pamela Richards, Peggy Schlegal, and William Jones.

[1] During the course of the study, Dr. Clarke moved to a new position as Dean of the College of Applied Life Sciences at the University of Illinois.

A number of other organizations were involved in the development of the survey and in the plans for display of data and are listed in appendix B. Within each State, coordinators were appointed who helped with contacts for the survey. A list of them appears in appendix C. The role of these outside advisers in the survey should be acknowledged with thanks.

Carl S. Blyth of the University of North Carolina made a number of helpful suggestions during the survey.

A final word of appreciation is due to the participating institutions. Although this was a voluntary survey, and the burden placed on respondents was relatively high, almost all of the invited schools said they would participate. Their cooperation reflects the importance which many in the field of athletics place upon the need to stress safety in the field and the need to develop better data on athletic injuries and deaths.

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May 1979

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Highlights

Over 5.4 million men and women participated in varsity sports activities sponsored by secondary schools and colleges in 1975-76. Tackle football had almost a million male participants in secondary schools alone plus 70,000 in two- and four-year colleges. Other contact sports had 1.5 million men and 603,000 women participants. In noncontact sports, totals for male and female participants were 1.3 million and 973,000.[1]

Another 5.1 million participants were reported in intramural activities. Of these, almost equal numbers were in contact and noncontact sports. Men accounted for 3.3 million of the total and women 1.8 million.[1]

A final 11.7 million participants were reported in physical education classes. Of these, 9.7 million were in secondary schools and 2.0 million in colleges. Men were 51.0 percent of the secondary and 53.4 percent of the college participants.[1]

Over a million athletic injuries occurred in school and college programs, including intramurals and physical education classes. Of these injuries, men received 825,000 and women 236,000.

Varsity sports activities resulted in 746,893 injuries. Of these, 325,957 were in tackle football, 270,025 in other contact sports, and 150,911 in noncontact sports. Women accounted for 28.7 percent of varsity athletic participants and 15.9 percent of those injured.

[1]Numbers for various types of athletic activity may be added to obtain totals for participation. However, as persons often participated in more than one type of sport or activity adding totals will result in duplicative counts of individuals.

A total of 14 deaths resulting from athletic activity were reported by the schools in the sample. Unlike other figures in this report, this figure is not adjusted to provide national estimates.

Of every 1,000 participants in tackle football, 280 were injured in the course of the season—including both minor/moderate and major injuries. Comparable figures for other contact sports and noncontact sports were 68 and 36.

The most frequently cited source of athletic health care was a coach or assistant coach, ranging from 77 percent of public secondary schools to 32 percent of four-year colleges.

Athletic trainers were found on the staff of 11 percent of public and 15 percent of private secondary schools and 16 percent of the two-year and 40 percent of the four-year colleges. Two-thirds of all four-year colleges which offered football had a trainer.

Around 80 percent of the injuries to men and 77 percent of those to women occurred when a health care person was available. However, in most cases assistance was provided by someone other than a certified athletic trainer.

Chapter I
BACKGROUND

During the 93rd Congress, a bill was introduced requiring that schools and colleges have available an athletic trainer as a means of reducing the number of injuries caused by sports activities and to minimize their long-term effects. This bill did not reach the floor for action.

Congress, however, was interested in learning the number of athletic injuries and the extent to which they were treated by a health care person. A bill was passed mandating that the Secretary of the Department of Health, Education, and Welfare conduct a study to determine the number of athletic injuries and deaths during a 12-month period and whether a qualified health person was in attendance when they occurred. This was supported by a number of organizations including the National Association of Athletic Trainers.

The bill was finally approved as Section 826(a) of Public Law 93-380. It requested separate statistics for men and women, for public and private secondary schools, and for two-year and four-year colleges. It also took a broad view of athletic activity and included intramurals and physical education programs.

Survey Activities

Before the survey could be designed, a number of policy questions had to be resolved. These included both the period for which data would be collected and the definitions to be used.

The bill which mandated the survey was signed on August 20, 1974 and if the survey year began 60 days after enactment, as originally stipulated, the data would have been collected for the period Oc-

tober 21, 1974 to October 20, 1975. This would have allowed schools too little time to prepare for the required record keeping and almost no time for the survey form to be developed and to obtain the necessary clearances before utilization. More importantly, it would have involved collecting data from two different school years and would have split the highly important football season. For these reasons, NCES proposed that the survey be based upon the period July 1, 1975 to June 30, 1976.

This change was discussed with Congressional staff and supported by them. As a result, the technical amendments included in H.R. 12835 authorized this change.

Another problem dealt with the scope of the survey. Given the $75,000 authorized for this project, it seemed impossible to conduct a comprehensive survey of all secondary schools and colleges. At the same time, NCES felt that the burden on schools and colleges could be reduced if a sample was used. Congressional staff agreed to this change, but requested that the sample be sufficiently large to provide State estimates.

A third modification requested by NCES was not approved. This would have eliminated physical education classes from the scope of the survey. NCES felt that the study was already large and that many schools and colleges did not maintain good records on these activities. Congressional staff members felt that data were needed on the broad spectrum of athletic activities and that physical education classes were an important part of that picture.

Resolution of Issues

A number of other issues had to be resolved before the survey strategy and questionnaire could be completed. Extensive consultations with experts in the field were held to gather the facts needed to make necessary decisions. These issues and the decisions reached on each of them were as follows:

a. What is athletics? Athletics was defined for use in this survey as interscholastic or intercollegiate athletic competition as well as practice for that competition including club sports. (Club sports are interschool contests, generally informal, and organized by student groups rather than the institutions.) Athletics also was defined as including intramural sports and physical education classes. Excluded from the scope of the survey were informal recreational activities which may occur on school or college property using equipment belonging to the institution.

The survey form defined athletics as varsity, club, and intramural sports (including physical education classes) that are organized, sponsored, or approved by the school (school district) or institution of higher education for its students.

To facilitate the analysis of data, information was collected on sports by three categories and by three types of athletic activities.

The sports categories included the following:

(1) Tackle football, only;

(2) Other contact sports, including baseball, basketball, boxing, field hockey, touch and other football (except tackle), ice hockey, judo, lacrosse, rodeo, rugby, soccer, softball, water polo, and wrestling;[1] and

(3) Noncontact sports, including archery, badminton, bowling, crew, cross country, curling, fencing, golf, gymnastics, riflery, skiing, squash, swimming/diving, tennis, track, and volleyball.

The activity group categories used were as follows:

(1) Athletic competition between schools (interscholastic and intercollegiate variety, subvarsity, and club sports);

(2) Practice for athletic competition between schools;

(3) Intramurals; and

(4) Physical education classes

b. What is a trainer? Rather than limiting the definition of a trainer to someone fully certified or approved by the National Association of Athletic Trainers (NATA), it was decided to include in the definitions all persons designed by their school as a trainer. While less than an ideal answer, this seemed the most practical arrangement in view of the many backgrounds which could be appropriate for this function.

c. What is an injury? Instead of using the type of injury, part of the body injured, or the fact that an injury was treated, it was decided to use time

[1]The definition of contact sports used for this survey, which was planned in 1974, may not be the same as that used in the regulation issued in 1975 for Title IX of the Education Amendments of 1972. Contact sports for the purposes of this survey included activities in which there is some opportunity for injury from contact during the course of play. Under Title IX, basketball, boxing, football, ice hockey, rugby, wrestling, and other sports "whose purpose or major activity involves bodily contact" may be classified as contact. (See 45 C.F.R. 86.41) Thus, several sports listed as contact in this survey may not be considered so under Title IX. Baseball and softball, for example, may not be contact sports in the context of the Title IX Regulations.

missed from athletic activity as the basis for determining whether an injury existed and its severity. Injuries were classified at one of two levels:

Minor/moderate injuries. Those which resulted in the participant missing the athletic activity (whether competition, practice, or instruction) or scheduled academic activities or would have missed it (had it been scheduled) for from one to twenty days following the day of onset of the injury.

Major injuries. Those which resulted in the participant missing the three or more weeks of scheduled practice or athletic or academic activities following the date of onset of the injury.

For injuries which occur at the end of a sports season, respondents were asked to reply on the basis of the time which the participant would have missed had the season been continuing.

Deaths. This included fatalities resulting from athletic activities.

d. What classification system should be used as the basis for reporting information on institutions and also for selection of the sample? Section 826 requested that separate data be provided on two-year and four-year colleges. The original legislation referred to definitions for institutions which divided two-year colleges into those with transfer programs and those with terminal occupational programs. There was general agreement, however, that two-year colleges should be treated as a single group.

It was decided that the secondary schools to be included in the survey would be defined as any institution with a grade 12. Where a single institution included all grades (such as one with kindergarten through 12th grade), data were to be collected only on students in grades 10 through 12. Junior high schools, separately organized as such, were not included in this study.

e. What size sample should be utilized? Before this question could be answered, guidance had to be obtained from Congressional staff regarding the level of detail required in the final report. When the answer came back that State estimates were desired, then the sample size was fixed at 1,298 colleges and 2,554 secondary schools.

f. How will athletic injury rates be determined? In order to determine the rate at which injuries occur, institutions were asked to report the total number of persons participating in a sport or type of activity during the course of the survey year.

g. How will deaths be handled? Deaths of athletes may occur as a result of competition or practice, during travel related to that competition, or for causes completely unrelated to athletic activity. For this reason, it was decided to check personally on all reported deaths to ascertain precisely how each occurred.

h. How often should reports from schools be obtained? A series of options was considered including quarterly, semi-annually, and annually. The Committee on Evaluation and Information Systems of the Council of Chief State School Officers, which worked closely on the development of the survey form, strongly urged the use of only a single report and this position was adopted for this survey.

Consultations with Outside Organizations

In addition to two meetings with Congressional staff representatives, consultations were held with a number of other organizations and additional groups in an effort to solicit suggestions or offers of assistance with the project. A list of contacts are provided below. Representatives of some of these groups were involved in meetings held on September 4, 1974 and November 20, 1975.

American Academy of Orthopedic Surgeons
American Academy of Pediatrics
American Alliance for Health, Physical Education, and Recreation
American College Health Association
American College of Sports Medicine
American Group Practices Association
American Medical Association
American Society of Oral Surgeons
Council of Chief State School Officers
National Athletic Injury/Illness Reporting System
National Athletic Trainers Association
National Association for Girls and Women in Sports
National Association for Intercollegiate Athletics
National Association of Collegiate Athletic Directors
National Federation of State High School Associations
National Bureau of Standards
National Center for Health Statistics
National Collegiate Athletic Association
National Junior College Athletic Association

National Safety Council
Nebraska Center for Health Education
President's Council on Physical Fitness and Sports
Temple University, Center for Sports Medicine and Science
University of Washington Medical School, Division of Sports Medicine
U.S. Consumer Product Safety Commission

Chapter II
RESPONSIBILITY FOR HEALTH SERVICES

The bill that led to this study focused on the potential effect of athletic trainers in promoting safety in athletics. The definition of athletic trainer used in this investigation identified the Certified or Associate Member of the National Athletic Trainers Association (NATA) as an index of competence. In 1968, the House of Delegates of the American Medical Association formally recognized the standards of the NATA for professional competence and encouraged its members to support the activities of NATA toward implementation of these standards. The trainer, it should be pointed out, develops a formal relationship with the available medical community, in a coordinated plan for health care services.

Many accredited programs for athletic trainers offer a strong college minor taken in conjunction with a related major leading to teacher certification. Thus, many trainers in secondary schools are part-time, serving also as a teacher in the institution which employs them.

A number of factors and problems make information on sports health care responsibility particularly important.

a. Faced with financial pressures, many institutions feel they are unable to afford hiring a qualified athletic trainer and, where such a trainer is available, the number of sports events in different locations creates coverage problems. Financial problems in athletics, furthermore, have been compounded by requirements for more equitable support of women's activities.

b. The relatively low pay for trainers may be discouraging some persons from entering the field.

In Northern Virginia, for example, part-time athletic trainers reported that they were paid only $1,300 a year for their services.[1] Many, of course, are teachers who receive a regular salary for that function.

c. School health facilities, run by a nurse, often close at the end of the school day, but long before the close of the athletic day.

d. Lack of available health personnel has led to modification of rules requiring specified medical or health services at athletic events. In a midwestern city, for example, a requirement that a doctor attend every interscholastic football game was repealed when doctors could not be found to attend the games.

In this survey, both secondary schools and colleges were asked to report the type of nonmedical persons with primary responsibility for emergency health care. They were asked to check the first applicable type from a list of options.

Information was collected on two types of athletic trainers: those with Certified or Associate Member status from NATA and all others. Combining these two types, the percent of institutions with a trainer was as follows:

Institutions	Percent of athletic trainers
Public secondary schools ...	10.9
Private secondary schools...	15.4
Two-year colleges	16.1
Four-year colleges	40.2

Only 5 percent of the secondary schools, 7 percent of the two-year colleges, and 28 percent of the four-year college trainers were accredited by NATA. It is clear, from these data, that nationally the current reliance is on someone other than an athletic trainer for providing on-site health care for athletic activities.

Not surprisingly, the proportion of trainers with NATA affiliation was higher in colleges than in secondary schools and higher in institutions offering tackle football than in the universe of schools. A summary of these distinctions appears in table 1.

The information presented on table 2 shows total enrollments at institutions by type of health care personnel available. The most frequently cited source of athletic health care, as reported in table 2, was provided by a coach or an assistant coach. This

Table 1.–Survey of athletic injuries and fatalities, percent of NATA certified or associate member athletic trainers to all athletic trainers, by type institution and institutions offering tackle football: United States 1975-76.

Institution	Percent of NATA certified or associate member athletic trainers to all athletic trainers	
	All institutions	Institutions offering football
Secondary school.	37	40
2-year college ...	45	50
4-year college ...	71	80

was the prime source reported by 76.6 percent of public and 62.6 percent of private secondary schools. At the college level, a coach or assistant coach was the source of health care reported by 58.2 percent of two-year institutions and 32.2 percent of four-year colleges and universities.

Pressures to keep the form as simple as possible and reduce respondent burden prevented including additional items on the qualifications of health care personnel. It would have been desirable to know the extent to which coaches received specific educational preparation for the role of the athletic trainer, and the extent to which they updated their skills in this area.

As shown by table 2, the school nurse was cited by both secondary schools and colleges as a primary source of meeting athletic health care needs. A relatively high number of institutions reported some type of health care personnel other than the options provided on the survey form. This ranged from 2.2 percent of public secondary schools to 11.8 percent of four-year colleges.

More surprising was the relatively high number of institutions which said they had no health care person available. While there may have been some reporting errors, from 3 to 10 percent (depending upon the type of institution) of the respondents said they had no health care available. Some of these responses, of course, may have come from institutions that elected to provide no health care and, thus, avoid the potential dangers of law suits stemming from that care. More likely, however, is the fact that many institutions simply have not been able to provide this service—whether on financial or other grounds.

[1] *Washington Post*, September 25, 1976, page C1

Table 2.–Survey of athletic injuries and fatalities, number of institutions and enrollment, by type institution and personnel having principal responsibility for on-site athletic health care: United States, 1975-76

Type of personnel	Number of institutions				Total Enrollment			
	Secondary schools		Colleges/ universities		Secondary schools		Colleges/ universities	
	Public	Private	2-year	4-year	Public	Private	2-year	4-year
Total	17,148	2,838	1,138	1,695	12,498,042	904,277	1,664,701	4,325,805
Athletic trainer, NATA certified or associate member	773	82	75	481	922,542	28,326	211,800	2,932,086
Athletic trainer, other	1,101	354	108	201	1,372,171	127,357	276,664	359,629
Coach or assistant coach	13,135	1,777	662	547	8,811,508	611,395	833,099	593,129
School nurse	897	285	77	137	792,049	48,590	166,318	137,051
Student assistant	127	39	16	64	157,732	30,477	17,787	85,117
Other	385	207	125	200	223,282	26,743	118,149	190,315
None	730	95	75	65	218,758	31,390	40,887	28,478

Note:–Details may not add to totals because they were estimated separately.

Table 3.–Survey of athletic injuries and fatalities, average enrollment of institutions, by presence of an athletic trainer, type institution, and institutions offering tackle football: United States, 1975-76

Enrollment	Secondary schools		2-year colleges		4-year colleges	
	All institutions	Institutions offering football	All institutions	Institutions offering football	All institutions	Institutions offering football
All institutions	738	831	1,407	2,431	2,259	4,616
Athletic trainer NATA certified or associate member institution	1,234	1,243	2,715	2,536	6,083	6,643
Athletic trainer, other	1,253	1,273	2,744	3,402	1,570	1,823

As might be anticipated, athletic trainers are more likely to be found at larger institutions, as shown in table 3. This shows the average enrollment at schools which had an athletic trainer and comparable information for all institutions.

At the secondary level, the average enrollment for all institutions was 738 (831 for those which offered football). By contrast, the average enrollment for those schools which had an athletic trainer was between 1,200 and 1,300. At the college level, with the one exception of "athletic trainer (other)" at four-year institutions, there was a direct correlation between the availability of a trainer and the average size of school. Trainers tend to be located at institutions with higher enrollments.

The presence of an athletic trainer is highly associated with the offering of tackle football. Respondents, at all levels, whose institutions offered varsity tackle football reported that they had a person responsible for preventing and treating athletic injuries as shown on table 3. It was not ascertained how much involvement the athletic trainer had with the rest of the athletic program.

Four of every five secondary schools that offered varsity football said they used a coach or an assistant coach for on-site treatment of athletic injuries. The relationship between the existence of a tackle football program at an institution and the presence of an athletic trainer is summarized below.

Percent of institutions with an athletic trainer available

Institution	Offering tackle football	Not offering tackle football
Public secondary school	13.5	0.9
Private secondary school	20.7	11.4
2-year college	53.1	7.7
4-year college	72.8	19.0

Another analysis, presented in table 4 shows the percentage representation of type of health care person serving athletic injuries by various kinds of institutions and those in each kind offering tackle football. Here, too, the linkage between football and the availability of an athletic trainer is clear. Likewise, as schools tend to offer football, at the college level, they are much less likely to rely on a coach for health services.

Table 5 shows similar data for institutions not offering tackle football. A final table in this section table 6, presents a summary of athletic health care availability in terms of percentages.

Table 4.–Survey of athletic injuries and fatalities, number of institutions and enrollment, by type institution and personnel having principal responsibility for on-site athletic health care at institutions offering tackle football: United States, 1975-76

Type of personnel	Number of institutions				Total enrollment			
	Secondary schools		Colleges/ universities		Secondary schools		Colleges/ universities	
	Public	Private	2-year	4-year	Public	Private	2-year	4-year
Total	13,640	1,222	211	670	11,146,212	513,647	508,202	3,106,297
Athletic trainer, NATA certified or associate member	773	55	56	391	922,542	24,754	149,614	2,577,484
Athletic trainer, other	1,068	198	56	97	1,351,224	106,008	187,117	189,671
Coach or assistant coach	10,940	783	86	118	7,856,840	330,773	152,381	197,078
School nurse	567	100	1	21	696,366	8,423	764	20,347
Student assistant	102	39	6	34	150,714	30,477	9,026	58,515
Other	191	47	6	11	168,526	13,212	9,300	63,202
None	0	0	0	0	0	0	0	0

Note:–Details may not add to totals because they were estimated separately.

Table 5.–Survey of athletic injuries and fatalities, number of institutions and enrollment, by type institution and personnel having principal responsibility for on-site athletic health care at institutions not offering tackle football: United States, 1975-76

Type of personnel	Number of institutions				Total enrollment			
	Secondary schools		Colleges/ universities		Secondary schools		Colleges/ universities	
	Public	Private	2-year	4-year	Public	Private	2-year	4-year
Total	3,508	1,616	927	1,025	1,351,830	390,630	1,156,499	1,219,509
Athletic trainer, NATA certified or associate member	0	28	18	90	0	3,572	62,186	354,602
Athletic trainer, other	33	156	53	105	20,947	21,349	89,546	169,958
Coach or assistant coach	2,195	993	576	430	954,668	280,622	680,718	396,051
School nurse	330	184	76	116	95,683	40,167	165,552	116,704
Student assistant	25	0	10	30	7,019	0	8,761	26,602
Other	193	161	119	189	54,756	13,530	108,849	127,114
None	730	95	75	65	218,758	31,390	40,887	28,478

Note:–Details may not add to totals because they were estimated separately.

Table 6.–Survey of athletic injuries and fatalities, percent of institutions, by type of personnel having principal responsibility for on-site athletic health care, type institution, and institutions offering tackle football: United States, 1975-76

Type of personnel	Secondary schools		2-year colleges		4-year colleges	
	All institutions	Offering football only	All institutions	Offering football only	All institutions	Offering football only
Athletic trainer, NATA certified or associate member	4.5	5.7	6.6	26.5	28.4	58.4
Athletic trainer, other	6.4	7.8	9.5	26.5	11.9	14.5
Coach or assistant coach	76.6	80.2	58.2	40.8	32.3	17.6
School nurse	5.2	4.2	6.8	0.5	8.1	3.1
Student assistant	0.7	0.8	1.4	2.8	3.8	5.1
Other	2.3	1.4	11.0	2.8	11.8	1.6
None	4.3	0.0	6.6	0.0	3.8	0.0

Chapter III
PARTICIPATION IN ATHLETICS

A major goal of this survey was to learn the numbers of institutions sponsoring various kinds of athletic activities and the number of participants by type of activity.

The proportion of secondary schools and colleges offering various types of athletic activities is shown in table 7. This table shows that secondary schools are more likely to offer varsity athletic competition in tackle football, other contact sports, and noncontact sports than are colleges.

In view of Title IX Regulations, the information on the availability of athletic activities for women is particularly significant. As anticipated both secondary schools and colleges offered women fewer opportunities for contact sports activities. The same, however, was also true for noncontact sports. Opportunities for participation in intramurals and physical education classes were virtually identical for both men and women.

A rather surprising finding was the extent to which secondary schools placed more emphasis on varsity sports activities than on intramurals. This was true for activities for both men and women.

More details appear in table 8 on the number of institutions. These data indicate the heavy concentration of varsity sports in secondary schools, the fact that tackle football has virtually been eliminated from the intramural sports program, and that a number of secondary schools and colleges do not offer physical education classes.

The number of individuals participating in various sports categories is shown in table 9. Combining the totals for secondary schools and colleges, for example, indicates that in athletic competition

Table 7.–Survey of athletic injuries and fatalities, percent of institutions offering competitive athletics, intramurals, and physical education classes, by type institution, sex, and activity group and sports category: United States, 1975-76

Activity group and sports category	Percent of institutions							
	Public Secondary schools		Private Secondary schools		2-year colleges		4-year colleges	
	Male	Female	Male	Female	Male	Female	Male	Female
Competitive athletic								
Tackle football	79.4	0.0	43.0	0.0	18.0	0.0	38.9	0.1
Other contact sports .	86.7	72.4	60.9	52.0	75.4	46.0	75.7	60.7
Noncontact sports . . .	82.7	78.3	51.3	55.4	64.9	57.2	70.0	66.8
Intramurals								
Tackle football	0.7	0.1	2.1	0.0	1.3	0.1	1.2	0.0
Other contact sports .	27.7	22.1	32.1	24.3	60.4	43.4	56.4	48.4
Noncontact sports . . .	26.2	27.1	24.8	30.6	55.3	56.2	61.4	59.5
Physical education classes	86.3	86.3	64.6	70.6	64.3	65.5	56.0	58.0

Table 8.–Survey of athletic injuries and fatalities, number of institutions with participants, by type institution, sex, and activity group and sports category: United States, 1975-76

Activity group and sports category	Number of institutions							
	Secondary schools				Colleges/universities			
	Public		Private		2-year		4-year	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	17,162	17,162	2,843	2,843	1,138	1,138	1,701	1,701
Competitive athletics								
Tackle football	13,632	0	1,222	0	205	0	661	2
Other contact sports .	14,878	12 425	1,731	1,479	858	524	1,287	1,033
Noncontact sports . . .	14,199	13,438	1,459	1,575	739	651	1,190	1,136
Intramurals								
Tackle football	115	11	61	0	15	1	21	0
Other contact sports .	4,762	3,800	914	692	688	494	960	824
Noncontact sports . . .	4,504	4,655	706	870	629	640	1,044	1,012
Physical education classes	14,817	14,806	1,836	2,006	732	745	955	986

Note.--Details may not add to totals because they were estimated separately.

between schools—1.122 million men were involved in tackle football. The totals for men in other contact sports and noncontact sports were 1.495 million and 1.349 million, respectively. These figures cannot be totalled together as many participants are counted more than once.[1] But, the implication is that between 2 and 3 million different men take part in varsity athletics each year, at either the secondary or collegiate levels.

At two of the surveyed colleges (and the responses were verified), women were members of intercollegiate football teams.

[1]The existence of duplicative counts merits special explanation. Except for tackle football under athletic competition, total counts for participants may be duplicates. In other words, a person who participated in both basketball and baseball would be reported twice under "other contact" sports. Similar duplicative counts were possible within those who were involved in noncontact sports, intramurals, and physical education classes.

Table 9.–Survey of athletic injuries and fatalities, number of participants, by type institution, sex, and activity group and sports category: United States, 1975-76

Activity group and sports category	Number of participants							
	Secondary schools				Colleges/universities			
	Public		Private		2-year		4-year	
	Male	Female	Male	Female	Male	Female	Male	Female
Competitive athletics								
Tackle football	963,938	0	89,379	0	13,582	0	56,100	2
Other contact sports . .	1,182,927	487,113	154,359	64,651	44,605	13,295	103,126	38,399
Noncontact sports	1,113,395	822,514	123,461	94,792	30,684	15,243	82,445	50,687
Intramurals								
Tackle football	13,429	405	28,234	0	780	44	1,375	0
Other contact sports . .	708,983	441,410	137,658	63,313	134,616	38,601	772,972	191,288
Noncontact sports	670,060	646,472	102,168	93,409	133,866	73,717	603,117	247,162
Physical education classes	4,575,953	4,324,970	356,527	411,809	540,368	418,448	532,303	516,328

Note.--Column totals not provided because of duplicated individual counts.

A major focus of this study was on football injuries; therefore, it is interesting to note what portion of secondary schools and colleges participate in tackle football. Table 10 shows the percentage of institutions responding to this survey which offer tackle football and related data from an analysis of membership in sports organizations by individual institutions. Obviously, schools and colleges holding membership in one of the sports associations are more likely to offer varsity football than all institutions.

Table 10.–Survey of athletic injuries and fatalities, percent of institutions offering varsity tackle football, by type institution: United States, 1975-76

Institution	Percent offering varsity tackle football	
	Survey sample	Sports institutional membership organizations
Secondary school. .	74	77
2-year college	19	25
4-year college	39	60

Table 11 shows the number of institutions offering various types of athletic activities and the number of participants. The average number of participants by type of activity and type of institution is shown, as well as the median number. The number of participants in varsity football in public secondary schools, for example, averages 71 but the median number is 62. This includes all members of the varsity squad plus any junior varsity or other teams and squads.

The average number of participants in tackle football is higher than the total for all other contact sports combined for men in two-year and four-year colleges. This reflects the fact that football squads are considerably larger than those for other contact sports. At the secondary level, the totals for other contact sports for men are somewhat higher than for football.

Several groups showed high average figures. At the secondary level, the average number of participants in intramural tackle football at private secondary schools was high (465). At the college level, the number of participants in intramurals at four-year colleges showed a high average (1,213). Here, both other contact sports and noncontact sports showed high average figures (805 and 578, respectively).

Table 11.–Survey of athletic injuries and fatalities, average and (median) number of participants per institution, by type institution, sex, and activity group and sports category: United States, 1975-76

Activity group and sports category	Number of participants per institution							
	Secondary schools				Colleges/universities			
	Public		Private		2-year		4-year	
	Male	Female	Male	Female	Male	Female	Male	Female
Competitive athletics	202	87	208	80	98	39	180	71
	(164)	(68)	(132)	(58)	(65)	(29)	(137)	(54)
Tackle football	71	0	73	0	66	0	85	1
	(62)	(0)	(61)	(0)	(59)	(0)	(79)	(1)
Other contact sports . .	80	39	95	44	52	25	80	37
	(62)	(30)	(70)	(34)	(40)	(18)	(66)	(30)
Noncontact sports . . .	78	61	85	54	42	23	69	45
	(57)	(46)	(50)	(33)	(23)	(17)	(46)	(27)
Intramurals	227	193	263	141	354	158	1,213	403
	(116)	(95)	(107)	(75)	(188)	(61)	(305)	(119)
Tackle football	116	0	465	0	52	0	67	0
	(96)	(0)	(587)	(0)	(44)	(0)	(89)	(0)
Other contact sports . .	149	116	151	91	196	78	805	232
	(76)	(53)	(76)	(47)	(112)	(35)	(243)	(92)
Noncontact sports	149	139	145	107	213	115	578	244
	(82)	(67)	(51)	(54)	(96)	(44)	(148)	(73)
Physical education classes	309	292	194	205	738	562	558	524
	(169)	(159)	(108)	(115)	(319)	(211)	(212)	(189)

Note.–Column totals not provided because of duplicated individual counts.
Median numbers are in brackets.

The figures for women were higher than anticipated. A total of 603,400 women were participating at the varsity level in other contact sports at both secondary schools and colleges and 973,200 were in noncontact activities. These rates, however, lag far behind those of men. Assuming some duplicates, but less than in the case of men, an estimated 1.0 to 1.2 million women took part in varsity sports. When Title IX is fully implemented, figures for women in sports activities should increase. Between 1972 and 1976, the number of women in athletics at the secondary level went up from 800,000 to 1.3 million, while men rose from 3.8 to 4.0 million. There are as many women as men enrolled as students in secondary schools, yet only 41.2 percent of women in public schools and 39.3 percent in private schools participated in other contact sports at the varsity level. The comparable figures for noncontact sports were 73.9 and 68.7 percent. All of these figures are subject to the same duplicate counting as cited earlier.

At the college level, where women constituted only 74.5 percent as many full-time students as men in 1975-76,[2] the figures were even lower. The total number of women involved in other contact sports was only 29.8 percent in two-year institutions and 37.8 percent in four-year colleges and universities. For noncontact sports, comparable figures were 49.7 and 61.5 percent.

Sex distinctions are less for intramural sports. In public secondary schools, women's total for other

[2] *Fall Enrollment in Higher Education, 1975: Institutional Data.* National Center for Education Statistics, 1976, page 4

contact sports is 62.2 percent and for noncontact sports is 96.5 percent. Comparable figures for private secondary schools are 46.0 and 91.4 percent. In two-year colleges, the number of women in other contact sports was 28.7 percent and in noncontact sports 55.1 percent. At the four-year college and university level, the number of women in other contact sports was 24.7 percent and in noncontact sports was 41.0 percent.

As participation tends to be required by the institution, the fact that physical education registration totals were generally equal for men and women was to be expected. Somewhat more men than women were reported in public secondary school classes, but more women than men in private secondary schools. At the college level, where men outnumber women, their rates in physical education classes are in close approximation to their share of the total enrollment.

The totals for physical education class participation are high; over nine million secondary school students, both public and private, participated in 1975-76. This is approximately 71 percent of the student population. Table 7 shows that 86.3 percent of the secondary schools offered physical education, indicating that a portion of those schools did not require physical education at every grade level. The data also show that participation in physical education clearly diminishes as one moves from secondary school to college.

Chapter IV
INJURIES AND DEATHS IN ATHLETICS

Over a million injuries occurred in secondary school and college athletic programs in 1975-76, according to survey results. These data, of course, must be viewed within the context of the severity of the injury, the availability of health care, and the ratios of injuries to participants.

Of the approximately one million injuries, 704,307 were minor and 111,098 were major injuries. An additional 244,879 injuries occurred in physical education classes and were not classed by severity.

Total injury details are shown in table 12 and indicate that men received 824,684 and women 235,592 injuries. For varsity sports activities, counting both competition and practice, injury totals for men were 325,927 for tackle football, 207,518 for other contact sports, and 94,497 for noncontact sports.[1] For women, total injuries were 62,507 in other contact sports and 56,514 in noncontact activities.

For both men and women, the bulk of the injuries occurred in secondary schools. This was to be expected in view of the fact that the majority of the participants are at this level. At the same time, there is less likelihood of trained health personnel being available in secondary schools than in colleges and universities.

More injuries occur in practice than in competition for most types of sports categories and types of

[1]The 326,000 football injuries reported in this survey compares fairly closely with the 370,000 estimated nonprofessional football injuries in a recent study by the U.S. Consumer Product Safety Commission. This number is somewhat less than the number of injuries which the Commission estimated would result from skateboard accidents in 1977.

Table 12.–Survey of athletic injuries and fatalities, number of injuries, by type institution, sex, and activity group and sports category: United States, 1975-76

Activity group and sports category	Number of injuries							
	Secondary schools				Colleges/universities			
	Public		Private		2-year		4-year	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	578,850	179,317	73,677	17,375	34,450	9,495	139,707	29,405
Athletic competition	210,251	39,946	29,988	6,463	12,000	2,369	43,119	7,377
Tackle football	114,936	0	12,645	0	4,808	0	19,891	1
Other contact sports	66,070	22,774	10,532	5,125	5,584	1,486	10,204	4,534
Noncontact sports	29,245	17,172	6,811	3,339	1,608	883	5,824	2,842
Athletic practice	218,119	43,263	30,572	4,758	13,037	2,433	70,787	12,414
Tackle football	121,892	0	14,549	0	3,914	0	34,122	0
Other contact sports	65,856	20,424	10,880	2,573	6,603	1,327	23,789	6,264
Noncontact sports	30,370	22,838	5,144	2,185	2,519	1,105	12,876	6,150
Intramurals	17,226	10,191	5,755	1,415	4,353	1,509	21,673	8,378
Tackle football	257	0	438	0	2	2	186	0
Other contact sports	10,505	4,881	3,397	861	3,214	862	16,036	3,759
Noncontact sports	6,464	5,309	1,920	554	1,138	645	5,450	2,619
Physical education classes	131,254	8,918	7,362	4,738	5,059	3,184	4,128	3,386

Note.–Details may not add to totals because they were estimated separately.

schools. Two factors may account for this. First, the game squad is generally smaller than the practice squad and only one set of participants from an institution is involved at one time. Second, relatively fewer hours are spent in competition than in practice. College football helps illustrate this point. A total of 19,091 injuries occurred in intercollegiate competition, normally a schedule of 10 games, each with 60 minutes of playing (and no more than two and a half hours of elapsed clock time). Even the total elapsed time accounts for no more than 30 hours for the typical season. By contrast, 34,122 injuries occurred in practice. However, many teams practice 14 weeks during the year, spending 10 to 15 hours a week at practice, totalling 140 to 210 hours for the season. Thus, for every hour of competition in intercollegiate tackle football, five to seven are spent in practice. At the same time, there is general agreement that the intensity of actual intercollegiate competition heightens the rate at which injuries are likely to occur for participants.

The total number of injuries to women suggest that their needs must play an important role in health care planning. As was cited earlier, when Title IX is fully operative, more women will participate in a wider range of sports. Also, assuming that the level of competition in women's sports continues to show its current rapid improvement, heightened competition will inevitably lead to more injuries.

The number of injuries that occurred in physical education classes was higher than anticipated and suggests that this area also needs more attention in planning health care. The total of 244,879 injuries is probably lower than the actual number as many schools do not maintain good records in this area.

While injury totals in noncontact sports are lower than in the two types of contact activities, their totals are high enough to warrant special mention in planning for health services. Too often, the existence of contact sports activities on the same day as noncontact activities automatically results in priority or all of the health service focus being placed on the contact activities.

Tables 13 and 14 provide details for minor/moderate and major injuries. They indicate that seven out of every eight injuries are minor/moderate. These totals do not add up to the total injuries shown in table 12, since physical education totals are included in table 12, but not in tables 13 and 14. Eighty-four percent of secondary and 88 percent of college injuries are classed as minor/moderate. Women received 17.1 percent of the minor/moderate injuries and 16.5 percent of the major injuries.

Table 13.–Survey of athletic injuries and fatalities, number of minor/moderate injuries, by type institution, sex, and activity group and sports category: United States, 1975-76

Activity group and sports category	Minor/moderate injuries							
	Secondary schools				Colleges/universities			
	Public		Private		2-year		4-year	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	380,399	80,334	58,114	11,081	25,755	5,758	119,837	23,079
Athletic competition	175,715	33,320	25,845	5,636	10,263	2,081	36,851	6,252
Tackle football	93,829	0	10,190	0	4,156	0	16,354	1
Other contact sports	55,948	18,474	9,243	2,519	4,681	1,275	15,304	3,797
Noncontact sports	25,939	14,845	6,413	3,117	1,426	807	5,193	2,454
Athletic practice	189,499	38,056	27,347	4,201	11,525	2,284	64,307	11,151
Tackle football	105,748	0	12,623	0	3,186	0	30,957	0
Other contact sports	57,187	18,304	9,821	2,198	5,951	1,238	21,394	5,659
Noncontact sports	26,563	19,752	4,903	2,003	2,389	1,046	11,956	5,491
Intramurals	15,186	8,958	4,923	1,195	3,966	1,393	18,679	5,676
Tackle football	200	0	351	0	2	1	75	0
Other contact sports	9,117	4,377	2,761	749	2,903	811	13,777	3,283
Noncontact sports	5,869	4,581	1,810	446	1,061	581	4,827	2,393

Note.--Details may not add to totals because they were estimated separately.

Table 14.–Survey of athletic injuries and fatalities, number of major injuries, by type institution, sex, and activity group and sports category: United States, 1975-76

Activity group and sports category	Major injuries							
	Secondary schools				Colleges/universities			
	Public		Private		2-year		4-year	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	65,196	13,072	8,201	1,605	3,837	553	15,744	3,090
Athletic competition	34,536	6,626	4,143	828	1,737	288	6,289	1,125
Tackle football	21,107	0	2,455	0	652	0	2,738	0
Other contact sports	10,122	4,299	1,289	606	903	211	2,899	736
Noncontact sports	3,307	2,327	398	222	182	77	632	389
Athletic practice	28,620	5,207	3,226	557	1,511	149	6,480	1,263
Tackle football	16,144	0	1,976	0	728	0	3,165	0
Other contact sports	8,669	2,120	1,058	375	653	90	2,395	805
Noncontact sports	3,807	3,087	241	182	130	59	920	658
Intramurals	2,040	1,233	833	220	387	116	2,993	702
Tackle football	57	0	88	0	0	1	111	0
Other contact sports	1,388	505	636	112	310	51	2,259	476
Noncontact sports	595	728	109	109	77	84	623	226

Note.--Details may not add to totals because they were estimated separately.

While injury rates are cited below, it is interesting to draw some general conclusions from the differences in injuries by sex. With one exception, male participants were injured at a higher rate than women.

Public secondary schools

Sports category	Women as percent of total participants	Women as percent of total injured (competition and practice for it)
Competitive other contact sports	29.2	24.7
Competitive noncontact sports	42.5	40.2
Intramurals other contact sports	38.4	31.7
Intramurals noncontact sports	49.1	45.1
Physical education classes	48.6	32.2

Four-year colleges

Sports category	Women as percent of total participants	Women as percent of total injured (competition and practice for it)
Competitive other contact sports	27.1	16.9
Competitive noncontact sports	38.1	23.2
Intramurals other contact sports	19.8	19.0
Intramurals noncontact sports	29.1	32.5
Physical education classes	49.2	43.9

All information on deaths as a result of athletic activity was carefully verified through telephone calls. This helped to insure that the deaths actually were related to athletic activity, rather than simply occurring (in a nonathletic setting) to someone who had been an athletic participant. Unlike other tables in this report, for which national estimates were provided, the details on deaths in table 15 report only the actual responses made by institutions in the sample.[2] These institutions reported 14 deaths, equally divided between secondary schools and colleges. All but one of these involved males. The one death for a woman was in a secondary school physical education class.

The distribution of deaths among various types of sports activities were as follows:

Tackle football	4
Other contact sports	4
Noncontact sports	3
Physical education classes	3

One conclusion is that a somewhat higher than anticipated number of deaths occurred in athletics other than tackle football. No deaths, however, were reported as a result of intramural athletic activity. Among the athletics, excluding physical education, five occurred in competition and six in practice for it. The national football fatality survey for 1975-76 showed 13 high school and college deaths.[3]

[2]Other results from the survey were increased to project national estimates from the actual survey responses. That was not done for the data on deaths as there were too few to provide statistically reliable information by categories used.

[3]The survey is made annually by Carl S. Blyth and David C. Arnold and sponsored by the American Football Coaches Association, the National Collegiate Athletic Association, and the National Federation of State High School Associations.

Table 15.–Survey of athletic injuries and fatalities, actual number of fatalities in sample schools, by activity group and sports category: United States, 1975-76[1]

Activity group and sports category	Fatalities			
	Secondary schools		Colleges/universities	
	Male	Female	Male	Female
Total	6	1	7	0
Tackle football				
Athletic competition	2	0	1	0
Athletic practice	1	0	0	0
Intramurals	0	0	0	0
Other contact sports				
Athletic competition	0	0	2	0
Athletic practice	1	0	1	0
Intramurals	0	0	0	0
Noncontact sports				
Athletic competition	0	0	0	0
Athletic practice	2	0	1	0
Intramurals	0	0	0	0
Physical education classes	0	1	2	0

[1]This table presents the actual fatalities reported by the 1,510 secondary schools and 980 colleges/universities, which responded to the survey. Of the deaths, 4 of the 8 secondary school and 6 of the 7 college/university deaths occurred where an athletic trainer or other health person was available.

Chapter V
INJURIES BY AVAILABLE HEALTH CARE

Respondents were asked whether the reported injuries occurred when a health care person was available. This was defined as if "not actualy present on the site, the person must have been capable of attending to the stricken participant within five minutes."

Several factors complicated the responses to the survey in this area and warrant citation, before reporting on the results. First, there was general recognition on the part of many who helped plan the survey, or who are knowledgeable in the area of athletic health care, that higher injury rates were likely to be submitted by institutions with the best health care staff and facilities. It was felt that the staff at these institutions would be "on top" of injuries — would be most apt to know about them and would be more likely to be turned to as a source of assistance by participants. By contrast, institutions with poor athletic health care services might be less likely to report their injuries and to maintain good records. For these reasons, in analyzing the results of this survey, no attempt was made to compare the rate at which injuries occurred by the availability of health care personnel.

Another complication is the confusion over who is a qualified health person. Some institutions considered a school nurse as adequate. Others cited a coach. Some reported a fully certified athletic trainer.

It should be pointed out that the ultimate source of health care is the physician and an effective

athletic health care service can only be judged to the extent that it meets three criteria:[1]

1. Availability at every scheduled practice or contest of a person qualified and delegated to render emergency care to an injured or ill participant;

2. Planned access to a physician by phone or nearby presence for prompt medical evaluation of the health care problems which warrant this attention; and

3. Planned access to a medical facility—including plans for communication and transportation.

This study measured only the first of these three elements.

Information on total injuries occurring with and without the service of a health person available are shown in table 16. Overall, the information shows that 79.6 percent of all injuries to men and 76.9 percent of all injuries to women occurred when an athletic trainer or other health care person was available.

The figures for health care personnel, it should be pointed out, include athletic coaches who double in that role. Many, as cited later under methodology, are not fully qualified for health care responsibilities. A sample of 456 coaches, listed as their school's prime source of health care assistance, was called and it was learned that 47 percent had not taken required advanced first aid or other work to qualify for their duties.

Total figures, combining those for men and women, show that health care personnel were available when injuries occurred for:

80.2 percent in athletic competition
77.5 percent in athletic practice
67.5 percent in intramurals
81.9 percent in physical education classes

This information, when analyzed by sex, shows that men tend to have a higher rate of availability of a health care person for their athletic activities than do women. However, when tackle football data is eliminated these distinctions may disappear. Both have approximately the same rate of health care personnel available for intramurals and physical education activities. These data, showing the percentage of athletic activities with a health care person available, are as follows:

Percentage of athletic activities with health care person available

Athletic activities	Men	Women
Athletic competition	82.0	74.8
Athletic practice	78.1	72.2
Intramurals	67.4	67.6
Physical education classes	82.0	81.6

For tackle football, the percentage of activities with a trained health care person in attendance is higher than for other activities. For athletic competition, the percentage of injuries which occurred when a health care person was available was 86.3 percent. The comparable percent, for practice for competition, was 80.4 percent.

In contrast to the information on tackle football, and these figures are also based only upon men, the rates for noncontact sports are lower. The figure for athletic competition is 78.1 percent and for athletic practice is 74.9 percent.

The relatively high figure for physical education may be explained by the total amount of athletic "exposure" time and the fact that these activities take place during the school day, when school health services are staffed. They may not be staffed during the after school period, when intramurals and athletic practice and competition occur.

As also was anticipated, men's tackle football injuries were the most likely to occur in settings where health care personnel were available, 83.1 percent. Comparable figures for men's other contact sports and noncontact sports were 76.6 and 73.4 percent.

Almost the same proportion of women's injuries occurred when a qualified health care person was available. The figure for other contact sports was 73.4 percent (slightly less than for men) and for noncontact sports was 75.7 percent (slightly higher than for men).

A series of tables show comparable figures for public secondary schools (table 17), private secondary schools (table 18), two-year colleges (table 19) and four-year colleges (table 20). A summary of

[1]These are adapted from guidelines developed by the National Collegiate Athletic Association's Committee on Competitive Safeguards and Medical Aspects of Sports.

Table 16.–Survey of athletic injuries and fatalities, number of persons injured, by athletic health care available, sex, activity group and sports category, and severity of injury: United States, 1975-76

Activity group and sports category and severity of injury	Number of persons injured			
	With athletic trainer or other health person available		Without athletic trainer or other health person available	
	Male	Female	Male	Female
Total	656,332	181,152	168,289	54,433
Athletic competition	242,341	42,019	52,993	14,136
Tackle football, minor/moderate	107,576	1	16,952	0
Tackle football, major	23,127	0	3,809	0
Other contact sports, minor/moderate	66,341	19,809	18,834	6,256
Other contact sports, major	11,312	3,398	3,892	2,454
Noncontact sports, minor/moderate	30,584	16,563	8,386	4,659
Noncontact sports, major	3,401	2,248	1,119	766
Athletic practice	259,741	46,668	72,739	16,200
Tackle football, minor/moderate	124,074	0	28,439	0
Tackle football, major	16,242	0	5,703	0
Other contact sports, minor/moderate	72,371	20,359	21,981	7,040
Other contact sports, major	8,946	2,310	3,828	880
Noncontact sports, minor/moderate	34,564	21,368	11,247	6,925
Noncontact sports, major	3,543	2,631	1,541	1,355
Intramurals	33,044	13,187	15,963	6,306
Tackle football, minor/moderate	403	1	224	0
Tackle football, major	140	1	117	0
Other contact sports, minor/moderate	18,362	5,970	10,197	3,260
Other contact sports, major	3,400	904	1,193	240
Noncontact sports, minor/moderate	9,760	5,384	3,808	2,616
Noncontact sports, major	980	926	424	201
Physical education classes	121,206	79,279	26,594	17,791

Note.--Physical education class injuries not reported by severity.
Details may not add to totals because they were estimated separately.

total injuries which occurred to both men and women when a health care person was available follows by type of institutions:

Percent injuries, by type of institution and sex

Institution	Men	Women
Public secondary school	77.2	76.0
Private secondary school	81.6	83.2
2-year college	81.7	78.1
4-year college	88.1	78.3

An encouraging observation is that the institutions with the greatest likelihood of serious injuries—four-year colleges and those with tackle football have the greatest incidence of health personnel available and the highest proportion of certified athletic trainers.

Two tables present details on the percentages of injuries which occurred when health care was available. Table 21 shows this information by activity group. These data show, once again, that four-year colleges are the most likely to have health care personnel available, followed by two-year col-

Table 17.–Survey of athletic injuries and fatalities, number of injuries reported by public secondary schools, by athletic health care available, sex, activity group and sports category, and severity of injury: United States, 1975-76

Activity group and sports category and severity of injury	Number of injuries public secondary schools			
	With athletic trainer or other health person available		Without athletic trainer or other health person available	
	Male	Female	Male	Female
Total	445,026	136,241	131,795	43,070
Athletic competition	164,577	28,669	45,663	11,277
Tackle football, minor/moderate	77,871	0	15,957	0
Tackle football, major	17,510	0	3,587	0
Other contact sports, minor/moderate	40,674	13,447	15,274	5,027
Other contact sports, major	7,082	2,182	3,039	2,118
Noncontact sports, minor/moderate	19,094	11,352	6,845	3,494
Noncontact sports, major	2,346	1,689	961	638
Athletic practice	158,788	30,106	59,312	13,157
Tackle football, minor/moderate	80,850	0	24,898	0
Tackle football, major	10,986	0	5,140	0
Other contact sports, minor/moderate	40,198	12,546	16,990	5,758
Other contact sports, major	5,621	1,350	3,048	770
Noncontact sports, minor/moderate	18,636	14,308	7,927	5,444
Noncontact sports, major	2,498	1,902	1,309	1,184
Intramurals	12,910	6,916	4,316	3,274
Tackle football, minor/moderate	21	0	179	0
Tackle football, major	28	0	30	0
Other contact sports, minor/moderate	6,764	2,763	2,353	1,614
Other contact sports, major	1,220	490	169	15
Noncontact sports, minor/moderate	4,423	3,026	1,447	1,556
Noncontact sports, major	456	638	139	90
Physical education classes	108,750	70,550	22,504	15,362

Note.--Physical education class injuries not reported by severity.
Details may not add to totals because they were estimated separately.

leges, private secondary schools, and public secondary schools. For colleges, approximately the same amount of health care is available during athletic competition and practice. For secondary schools, somewhat less health care is available for practice. Four-year colleges provide much less health care for injuries which occur in the intramural program. By contrast, two-year colleges and both public and private secondary schools provide about as much for intramurals as for athletics leading to interschool competition. Table 22 reports similar data by sports category.

Table 18.--Survey of athletic injuries and fatalities, number of injuries reported by private secondary schools, by athletic health care available, sex, activity group and sports category, and severity of injury: United States, 1975-76

Activity group and sports category and severity of injury	Number of injuries private secondary schools			
	With athletic trainer or other health person available		Without athletic trainer or other health person available	
	Male	Female	Male	Female
Total	60,085	14,473	13,575	2,903
Athletic competition	26,714	5,371	3,270	1,093
Tackle football, minor/moderate	9,501	0	689	0
Tackle football, major	2,294	0	157	0
Other contact sports, minor/moderate	7,877	2,066	1,366	453
Other contact sports, major	970	459	319	147
Noncontact sports, minor/moderate	5,747	2,680	666	436
Noncontact sports, major	325	165	73	56
Athletic practice	22,450	3,751	8,108	1,007
Tackle football, minor/moderate	9,751	0	2,872	0
Tackle football, major	1,449	0	477	0
Other contact sports, minor/moderate	7,348	1,745	2,473	452
Other contact sports, major	794	349	264	27
Noncontact sports, minor/moderate	2,945	1,559	1,958	444
Noncontact sports, major	163	8	65	84
Intramurals	5,160	1,269	596	147
Tackle football, minor/moderate	351	0	0	0
Tackle football, major	88	0	0	0
Other contact sports, minor/moderate	2,360	689	401	61
Other contact sports, major	562	66	74	46
Noncontact sports, minor/moderate	1,706	427	104	19
Noncontact sports, major	93	87	16	22
Physical education classes	5,761	4,082	1,601	657

Note.--Physical education class injuries not reported by severity.

Details may not add to totals because they were estimated separately.

Table 19.–Survey of athletic injuries and fatalities, number of injuries reported by 2-year colleges, by athletic health care available, sex, activity group and sports category, and severity of injury: United States, 1975-76

Activity group and sports category and severity of injury	Number of injuries 2-year colleges			
	With athletic trainer or other health person available		Without athletic trainer or other health person available	
	Male	Female	Male	Female
Total	28,139	7,415	6,308	2,080
Athletic competition	10,324	1,917	1,676	452
Tackle football, minor/moderate	3,945	0	212	0
Tackle football, major	629	0	22	0
Other contact sports, minor/moderate	3,704	1,010	977	264
Other contact sports, major	704	172	199	39
Noncontact sports, minor/moderate	1,190	664	236	142
Noncontact sports, major	153	70	29	6
Athletic practice	11,085	1,979	1,951	454
Tackle football, minor/moderate	3,005	0	181	0
Tackle football, major	711	0	17	0
Other contact sports, minor/moderate	4,674	994	1,277	244
Other contact sports, major	496	64	156	26
Noncontact sports, minor/moderate	2,086	870	303	176
Noncontact sports, major	113	51	18	8
Intramurals	3,061	1,128	1,293	382
Tackle football, minor/moderate	2	1	0	0
Tackle football, major	0	1	0	0
Other contact sports, minor/moderate	2,002	570	901	242
Other contact sports, major	195	47	115	4
Noncontact sports, minor/moderate	801	452	260	128
Noncontact sports, major	61	57	16	8
Physical education classes	3,669	2,392	1,389	792

Note.--Physical education class injuries not reported by severity.
Details may not add to totals because they were estimated separately.

Table 20.–Survey of athletic injuries and fatalities, number of injuries reported by 4-year colleges, by athletic health care available, sex, activity group and sports category, and severity of injury: United States, 1975-76

Activity group and sports category and severity of injury	Number of injuries 4-year colleges			
	With athletic trainer or other health person available		Without athletic trainer or other health person available	
	Male	Female	Male	Female
Total	123,083	23,023	16,612	6,381
Athletic competition	40,726	6,062	2,384	1,315
Tackle football, minor/moderate	16,259	1	95	0
Tackle football, major	2,693	0	43	0
Other contact sports, minor/moderate	14,087	3,285	1,217	512
Other contact sports, major	2,556	585	335	151
Noncontact sports, minor/moderate	4,553	1,867	640	587
Noncontact sports, major	577	324	55	65
Athletic practice	67,417	10,832	3,369	1,582
Tackle football, minor/moderate	30,468	0	489	0
Tackle football, major	3,096	0	69	0
Other contact sports, minor/moderate	20,152	5,074	1,242	586
Other contact sports, major	2,035	548	360	57
Noncontact sports, minor/moderate	10,897	4,630	1,059	862
Noncontact sports, major	769	580	150	78
Intramurals	11,914	3,874	9,758	2,504
Tackle football, minor/moderate	30	0	45	0
Tackle football, major	24	0	87	0
Other contact sports, minor/moderate	7,236	1,949	6,541	1,334
Other contact sports, major	1,424	302	835	175
Noncontact sports, minor/moderate	2,831	1,480	1,997	913
Noncontact sports, major	369	144	254	82
Physical education classes	3,025	2,255	1,101	980

Note.–Physical education class injuries not reported by severity.
Details may not add to totals because they were estimated separately.

Table 21.–Survey of athletic injuries and fatalities, percent of injuries by athletic health care available, sex, activity group, severity of injury, and type of institution: United States, 1975-76

Activity group and sports category and severity of injury	Percent of injuries							
	Secondary schools				Colleges/universities			
	Public		Private		2-year		4-year	
	Male	Female	Male	Female	Male	Female	Male	Female
Athletic competition								
Tackle football, minor/moderate	82.9	NA	93.2	NA	94.9	NA	99.4	NA
Tackle football, major	83.0	NA	93.4	NA	96.5	NA	98.4	NA
Other contact sports, minor/moderate	72.7	72.8	85.2	82.0	79.1	79.2	92.0	86.4
Other contact sports, major	70.0	50.8	75.3	75.7	78.0	81.5	93.4	79.5
Noncontact sports, minor/moderate	73.6	76.5	89.6	86.0	83.5	82.3	87.7	76.1
Noncontact sports, major	70.9	72.6	81.7	74.3	84.1	90.9	91.3	83.3
Athletic practice								
Tackle football, minor/moderate	76.5	NA	77.2	NA	94.3	NA	98.4	NA
Tackle football, major	72.5	NA	75.2	NA	97.7	NA	97.8	NA
Other contact sports, minor/moderate	70.3	68.5	74.8	79.4	78.5	80.3	94.2	90.0
Other contact sports, major	64.8	63.7	75.0	93.1	76.0	71.1	85.0	90.6
Noncontact sports, minor/moderate	70.2	72.4	60.1	77.8	87.3	83.2	91.1	84.3
Noncontact sports, major	65.6	61.6	67.6	53.8	86.9	86.4	83.6	88.1
Intramurals								
Tackle football, minor/moderate	10.5	NA	100.0	NA	100.0	NA	40.0	NA
Tackle football, major	49.1	NA	100.0	NA	NA	NA	21.6	NA
Other contact sports, minor/moderate	74.2	63.1	85.5	92.0	69.0	70.3	52.5	59.4
Other contact sports, major	87.9	97.0	88.4	58.9	62.9	92.2	63.0	63.4
Noncontact sports, minor/moderate	75.4	66.1	94.3	95.7	75.5	77.8	58.6	61.8
Noncontact sports, major	76.6	87.6	85.3	79.8	79.2	89.1	59.2	63.7

NA: Not available.

Table 22.–Survey of athletic injuries and fatalities, percent of injuries by athletic health care available, sex, sports category, severity of injury, and type of institution: United States, 1975-76

Percent of injuries

Sports category and severity of injury	Secondary schools				Colleges/universities			
	Public		Private		2-year		4-year	
	Male	Female	Male	Female	Male	Female	Male	Female
Tackle football								
Total	79.1	NA	84.6	NA	95.0	NA	98.7	NA
Minor/moderate	79.5	NA	84.4	NA	94.7	NA	98.8	NA
Major	76.3	NA	85.4	NA	97.1	NA	97.2	NA
Other contact sports								
Total	70.9	68.3	79.3	81.2	78.6	79.6	92.5	87.9
Minor/moderate	71.5	70.7	80.0	80.8	78.8	79.7	93.3	88.4
Major	67.6	55.0	75.2	82.4	77.1	78.4	86.7	84.5
Noncontact sports								
Total	71.4	73.1	76.8	81.5	85.8	83.2	89.8	82.3
Minor/moderate	71.9	74.2	76.8	82.8	85.9	82.8	90.1	81.8
Major	68.1	66.3	76.4	65.1	85.3	89.0	86.7	86.3
Physical education								
Total	82.9	82.1	78.3	86.2	72.5	75.1	73.3	69.7

NA: Not available.

Chapter VI
INJURY RATES IN ATHLETICS

Information on injuries in athletics obviously means more when related to extent of participation in athletics. A series of tables follows providing ratios for injuries using the measure of the number of injuries per 1,000 participants.

Table 23 shows the number of injuries by type of activity group and sports category. The combined injuries for athletic competition, practice, and intramurals and the ratios developed by sports category were:

Tackle football	280 injuries per 1,000 participants
Other contact sports	68 injuries per 1,000 participants
Noncontact sports	36 injuries per 1,000 participants

In almost every case, men have a higher injury rate than do women for the above categories.

A series of tables provides injury ratio data for secondary schools (table 24), two-year colleges (table 25) and four-year colleges (table 26). Rates are significantly higher in colleges, reflecting the fact that intensified competition appears to result in higher injury rates. In view of the fact that four-year colleges have a tackle football injury rate of 929, and all secondary schools and colleges combined a rate of only 280, it is clear that the large number of secondary school participants tend to lower this rate considerably. Another factor, of course, may be a tendency for secondary schools to be less precise in reporting athletic injury data. The rate of injuries in tackle football, it should be pointed out, is four times higher than the rate in other contact sports and eight times higher than in noncontact sports.

Table 23.–Survey of athletic injuries and fatalities, injury rate, by activity group, sports category, severity of injury, and sex: United States, 1975-76

[Per 1,000 participants]

Severity of injuries	Injury rate											
	Athletics (combined)			Athletic competition			Athletic practice			Intramurals		
	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact
All injuries	280	68	36	135	63	29	155	66	36	20	17	9
Male	280	74	38	135	67	32	155	72	38	20	19	10
Female	NA	54	32	NA	53	25	NA	51	33	NA	14	9
Minor/moderate injuries	238	59	32	111	53	26	136	58	32	14	15	8
Male	238	64	34	111	57	29	136	63	34	14	16	9
Female	NA	47	28	NA	43	22	NA	45	29	NA	13	8
Major injuries	42	9	4	24	10	3	20	8	4	6	2	1
Male	42	10	4	24	10	3	20	9	4	6	3	1
Female	NA	8	4	NA	10	3	NA	5	4	NA	2	1

NA: Not available.

Note.–Physical education injury counts not available by severity.

Table 24.–Survey of athletic injuries and fatalities, injury rate for secondary schools, by activity group, sports category, severity of injury, and sex: United States, 1975-76

[Per 1,000 participants]

Severity of injuries	Injury rate secondary schools											
	Athletics (combined)			Athletic competition			Athletic practice			Intramurals		
	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact
All injuries	242	68	36	121	54	26	130	53	28	17	15	9
Public	242	68	34	119	53	24	126	52	27	19	13	9
Male	243	75	37	119	56	26	126	56	27	19	15	10
Female	0	52	31	0	47	21	0	42	28	0	11	8
Private	235	73	49	141	60	49	163	59	35	16	21	13
Male	235	82	61	141	64	55	163	66	42	16	25	19
Female	0	51	34	0	48	39	0	40	26	0	14	6
Minor/moderate injuries	204	59	32	99	45	23	112	46	25	13	13	8
Public	204	58	30	97	45	21	110	45	24	14	12	8
Male	204	65	33	97	47	23	110	48	24	15	13	9
Female	0	44	27	0	38	18	0	38	24	0	10	7
Private	197	63	46	114	51	46	141	52	33	12	17	12
Male	197	72	58	114	56	52	141	60	40	12	20	18
Female	0	43	31	0	39	37	0	34	24	0	12	5
Major injuries	38	10	4	22	9	3	17	6	3	3	2	1
Public	38	10	4	22	9	3	17	6	4	4	2	1
Male	38	11	4	22	9	3	17	7	3	4	2	1
Female	0	7	4	0	9	3	0	4	4	0	1	1
Private	38	9	3	27	8	3	22	6	2	3	4	1
Male	38	10	3	27	8	3	22	6	2	3	5	1
Female	0	9	3	0	9	3	0	6	2	0	2	1

Note.--Physical education injury counts not available by severity.
Details may not add to totals because they were estimated separately.

Table 25.–Survey of athletic injuries and fatalities, injury rate for 2-year colleges, by activity group, sports category, severity of injury, and sex: United States, 1975-76

[Per 1,000 participants]

Severity of injuries	Injury rate 2-year colleges											
	Athletics (combined)			Athletic competition			Athletic practice			Intramurals		
	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact
All injuries	607	83	31	354	122	54	288	137	79	3	24	9
Male	607	86	32	354	125	52	288	148	82	3	24	8
Female	0	71	30	0	112	58	0	100	73	0	22	9
Minor/moderate injuries	511	73	29	306	103	49	235	124	75	3	21	8
Male	511	76	30	306	105	46	235	133	78	3	22	8
Female	0	64	27	0	96	53	0	93	69	0	21	8
Major injuries	96	10	2	48	19	6	54	13	4	0	2	1
Male	96	10	2	48	20	6	54	15	4	0	2	1
Female	0	7	2	0	16	5	0	7	4	0	1	1

Note.–Physical education injury counts not available by severity.

Table 26.–Survey of athletic injuries and fatalities, injury rate for 4-year colleges, by activity group, sports category, severity of injury, and sex: United States, 1975-76

[Per 1,000 participants]

Severity of injuries	Injury rate 4-year colleges											
	Athletics (combined)			Athletic competition			Athletic practice			Intramurals		
	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact	Tackle football	Other contact	Non-contact
All injuries	929	66	36	340	161	65	608	212	143	135	21	9
Male	929	66	35	340	176	71	608	231	156	135	21	9
Female	0	63	39	0	118	56	0	163	121	0	20	11
Minor/moderate injuries	824	57	33	292	135	57	552	191	131	54	18	8
Male	824	58	32	292	148	63	552	207	145	54	18	8
Female	0	55	35	0	99	48	0	147	108	0	17	10
Major injuries	105	8	4	49	26	8	56	21	12	81	3	1
Male	105	9	3	49	28	8	56	23	11	81	3	1
Female	0	8	4	0	19	8	0	16	13	0	2	1

Note.–Physical education injury counts not available by severity.

Table 27.–National Athletic Injury/Illness Reporting System (NAIRS) athletic injury rate, by type institution, sports category, severity of injury, and sex: United States, 1975-76

[Per 1,000 participants]

Sports category and severity of injury	Injury rate			
	Secondary school (Public)		College/university (4-year)	
	Male	Female	Male	Female
Tackle football				
Total	556	NA	784	0
Minor/moderate	474	NA	687	0
Major	82	NA	97	0
Other contact sports				
Total	308	NA	751	367
Minor/moderate	281	NA	657	321
Major	27	NA	94	46
Non-contact sports				
Total	49	NA	138	297
Minor/moderate	42	NA	95	232
Major	7	NA	43	65

NA: Not available.

Comparable data from the NAIRS program are shown in table 27. Here the secondary school injury ratios are higher than reported in this survey, but those from colleges are lower. To illustrate, for tackle football, NAIRS showed injury ratios for four-year colleges of 687 for minor/moderate and 97 for major, in contrast to the 824 and 104 for this survey.

The information from this survey on injuries in two-year colleges demonstrates an interesting attribute. In contrast to information from secondary schools and four-year colleges, more tackle football injuries occur in athletic competition than in practice for it. This may reflect less practice time, less conditioning, or unknown factors. Injury rate information, of course, becomes much more meaningful when related to such factors as playing position; age, physical condition, and prior playing experience of the participant; type of action and timing in contest; and other variables.[1]

[1] A study by Frederick O. Mueller and Carl S. Blyth: "North Carolina High School Football Injury Survey" *Journal of Sports Medicine* January-February 1974 illustrates this point and highlights the need for more detailed research. Football using a reconditioned field resulted in an injury rate of 131 per 1,000 players, as compared with 213 for unreconditioned fields. A future NAIRS study on product-related injuries for the U.S. Consumer Product Safety Commission will identify factors to be considered in analysis of injury patterns.

Appendixes

Appendix A
METHODOLOGY

Unique procedures and problems characterize each survey. This section has been prepared to summarize the techniques and results involved in various sections of the athletic injury study.

The wording of the text which authorized the study, originally in Public Law 93-380, is cited below along with the changes which were included in the Education Amendments of 1976.

STUDY OF ATHLETIC INJURIES

SEC. 826. (a) The Secretary shall make a full and complete investigation and study of a representative sample of schools to determine—

(1) the number of athletic injuries to, and deaths of male and female students occurring in athletic competition between schools, in any practice session for such competition, and in any other school-rated athletic activities for the twelve-month period beginning July 1, 1975;

(2) the number of athletic injuries and deaths occurring (for the twelve-month period under clause (1)) at each school with an athletic trainer or other medical or health professional personnel trained to prevent or treat such injuries and at each school without such personnel.

(b) The Secretary shall request each school to maintain appropriate records to enable it to compile information under subsection (a) and shall request such school to submit such information to the Secretary immediately after the twelve-month period beginning July 1, 1975. Not later than eighteen months after such date, the Secretary shall make a report to the Congress on the study required by subsection (a), together with such recommendations as he may deem appropriate. In such report, all information required under each paragraph of subsection (a) shall be stated separately for the two groups of schools under clauses (1) and (2) of subsection (c), except that the information shall also be stated separately (and shall be excluded from the group under clause (2)) for institutions of higher education which provide either of the two-year programs described in section 801(E)(3) of the Elementary and Secondary Education Act of 1965.

(c) For the purposes of this section, the term "school" means (1) any secondary school or (2) any institution of higher education, as defined in section 801 of the Elementary and Secondary Education Act of 1965.

(d) There is authorized to be appropriated the sum of $75,000 to carry out the provisions of this section.

(20 U.S.C. 241a note) Enacted August 21, 1974, P.L. 93-380, sec. 826, 88 Stat. 603; amended October 12, 1976, P.L. 94-482, Title V, Part A, sec. 501 (18), (19), 90 Stat. 2236.

The bill, it should be pointed out, desired separate statistics for men and women, for public and private secondary schools, and for two-year and four-year colleges. It also took a broad view of athletic activity. A limit of $75,000 was placed on the amount which could be spent on this survey.

Concern for Athletic Injuries

During the hearings on this bill, a number of comments were made concerning the extent and impact of injuries in athletics. The background reports on Public Law 93-380 included the following:

ATHLETIC SAFETY STUDY

The Committee bill directs the Secretary to undertake a study of the incidence of injuries occuring in scholastic athletic programs. The purpose of this study is to gather comprehensive data so that those persons and groups, including this Committee, interested in athletic safety will have the necessary data base to evaluate the problem and to fashion appropriate solutions.

One of the readily apparent potential solutions is making athletic trainers available to more scholastic institutions. The Committee bill therefore directs the Secretary to determine the present and future availability of athletic trainers and to evaluate the economic cost of making the services of these trainers available to schools having a sports program. The Secretary is further directed to recommend to the Congress appropriate procedures for the certification of athletic trainers.

Preliminary studies available to the Committee indicate there will be millions of youngsters participating in interscholastic athletics this year and that a significant number of these students will suffer some form of injury. These preliminary studies based on spot surveys suggest that as many as 40,000 knee injuries requiring surgery are sustained by scholastic athletics each year. Other preliminary studies estimate that only one quarter of these 40,000 would have needed surgery if the involved schools had a qualified athletic trainer available to administer the proper specialized care that any athlete needs.

The American Medical Association estimates that approximately 50% of the 1.2 million young men who play high school football will sustain some form of injury this year. Many of these injuries will be recurring ones because of the lack of proper on-the-spot and long term medical care. Many college coaches and athletic trainers lament the fact that most of the injuries to college athletes can be traced directly to old high school injuries. In fact, the AMA Committee on the Medical Aspects of Sports asserts that parents should insist on the presence of an athletic trainer before letting their children participate in school sports.

Despite these staggering injury statistics, there is a striking absence of certified athletic trainers in our nation's schools. Of the nearly 15,000 high schools in the United States with football programs, it is estimated that only about 100 have full time certified athletic trainers.

The few statistics presented thus far point to the existence of a problem of some magnitude. Yet the data is incomplete and there is presently no effort within the federal government or the private sector to develop a comprehensive data collection system through which this problem can be effectively analyzed. It is the intent of the Committee to provide the mechanism to establish such a system and to gather data during one academic year. This data will better enable the Committee and the public to evaluate solutions to the problem of athletic safety in our nation's schools.

Planning for the survey began in the fall of 1974. Some of the meetings, negotiations, and other activities in this period were cited briefly in the Survey Activities section.

Initial planning within NCES was followed by two activities. The first was a meeting with experts in the field, held early in September 1974. The second was a letter from the U.S. Department of Health, Education, and Welfare sent to both chief state school officers and college presidents. Signed by Virginia Y. Trotter, then Assistant Secretary for Education, the letter pointed out the legislation in Section 826 mandating the survey of athletic injuries and deaths and requesting that institutions establish appropriate records system to enable them to compile information in this area. A copy of that letter appears in appendix B. Each chief state school officer also was asked to nominate a coordinator for this survey. All did so, and a list of those coordinators appears in appendix C. In 32 of the States, the coordinator elected to make contact with the secondary schools drawn in the sample. In the remaining States, NCES or the contractor made the contact.

Plans for the survey form itself were developed in close cooperation with the National Athletic Injury/Illness Reporting System (NAIRS) directed by Dr. Kenneth S. Clarke of Pennsylvania State University. Dr. Clarke had spent several years working with a wide variety of concerned organizations to develop a system of recording and reporting on athletic injuries and utilization of much of this system saved months of planning time. Also working on development of the form was a special committee appointed by the Committee on Educational Information Systems of the Council of Chief State School Officers.

A contract was negotiated with NAIRS to conduct the actual survey, including close liaison with institutions in the sample and assisting in the interpretation of data from the survey. The professional standing of this group enhanced the survey.

Another benefit of working with NAIRS was to take advantage of its relationships with key organizations in the field. Notices were placed in a number of publications alerting persons in the field to the survey and encouraging those drawn in the sample to comply as best as they could. Among the groups which cooperated in running such notices were the National Athletic Trainers Association, the National Federation of State High School Associations, the National Junior College Athletic Association, the National Collegiate Athletic Association, and the American College Health Association.

To summarize the relationships which existed, NCES developed the questionnaire and selected the institutions for the sample. NAIRS conducted the survey, the followup, and did the manual editing. The NAIRS staff prepared a report for NCES on both the results of this survey and NAIRS activities which helped provide the basis for this report. NCES programmed the tables and prepared the final report. In actuality, however, cooperative activities characterized each of these steps.

Sample Selection

Following approval of the concept of utilizing a sample, specific institutions were chosen to represent the secondary schools and colleges and universities within each State, thus permitting the development of State estimates of athletic injuries. Secondary schools were stratified, for sample selection, on the basis of control (public and private) and geographical area (central city, outside central city, and outside Standard Metropolitan Area or rural). Colleges were stratified by level (two-year and four-year). For both secondary schools and colleges, selection was proportionate to the enrollments in the institutions.

Institution	Total number	Sample size
Total colleges	2,839	1,246
2-year colleges	1,138	614
4-year colleges	1,701	632
Total secondary schools	20,005	2,525
Public secondary schools	17,162	1,796
Private secondary schools	2,843	729

The sample included 12.6 percent of all secondary schools and 43.8 percent of all colleges and universities. Details appear in table 28.

Despite the extra burden that the survey placed on institutions, they were very cooperative in agreeing to participate. At the college level, for example, 1,246 institutions were asked to participate in the survey. All but 94 said they would cooperate with

Table 28.–Survey of athletic injuries and fatalities, by universe and sample size: United States, 1975-76

Universe and sample size	Secondary schools						Colleges/universities					
	Number of institutions			Enrollment			Number of institutions			Enrollment		
	Total	Public	Private	Total	Public	Private	Total	2-year	4-year	Total	2-year	4-year
National universe	20,005	17,162	2,843	13,405,435	12,499,704	905,731	2,839	1,138	1,701	5,995,568	1,664,700	4,330,868
Sample size	2,525	1,796	729	1,724,783	1,467,884	256,899	1,246	614	632	3,710,740	1,045,265	2,665,475
Percent of universe	12.6	10.5	25.6	12.9	11.7	28.4	43.9	54.0	37.2	61.9	62.8	61.5
Sample returns	1,510	1,125	385	1,048,999	912,653	136,346	980	482	498	3,025,123	764,145	2,260,978
Percent of sample	59.8	62.6	52.8	60.8	62.2	53.1	78.7	78.5	78.8	81.5	73.1	84.8
Percent of universe	7.5	6.6	13.5	7.8	7.3	15.1	34.5	42.4	29.3	50.5	45.9	52.2

the survey. The reasons given for the nonparticipation may be summarized as follows:

Institution was closed	9
Institution had no athletic program	63
Did not respond or unwilling to participate and another school substituted	21
No substitute possible	1

In some cases, schools added an extra person to their staff to gather data for this survey. A state university, for example, hired a half-time graduate assistant to make sure that the required data were collected.

Clarification

As is true of any first-time survey, clarifications were needed as questions from respondents developed. Some of those encountered in the survey and how they were handled were as follows:

1. The survey form was changed as early questions indicated that more detail was needed to define what was meant by the phrase "other health person." This was clarified by NAIRS to mean only "physicians, nurses, and those who are currently certified in both Advanced First Aid and Emergency Care (American Red Cross) and Cardio-Pulmonary Resuscitation (American Red Cross or American Heart Association) and who are available to the athletic trainer or physical education program in some planned manner."

2. Because students in physical education classes are generally involved in a wide variety of athletics or sports, it was not practical to ask for specific details on the sports categories in which injuries occur. Records were not maintained by the type of sport. Thus, the form was simplified to ask only for total injuries in physical education classes.

3. It was not clear whether a sports-related death was to be tallied among the major injuries or separately. It was decided that they would be tallied separately. Also, all reported deaths would be investigated further, by a telephone call, to determine how and when they occurred. In this way, nonsports-related deaths of athletes might be eliminated from the scope of the survey.

4. Varsity squads often have a high attrition rate during early season practices. It was determined that the total varsity participants to be recorded on the survey report form should be representative of the customary squad size after the first two weeks of practice. However, an athlete who received an early season injury and subsequently did not make the squad was to be reported as a participant and an injury.

5. A major problem was estimating participants in physical education classes. This was expressed by a larger school which used modular scheduling as its method of class assignment:

> ...it would be far more meaningful to have included the number of course registrations for "PE" classes, rather than the unique number of students taking these classes. As it stands now, a student is only counted once, regardless of the number of classes he or she enrolled for during the year. Conceptually, this is a meaningless statistic because a student who takes ten classes is much more apt to receive an injury than the person who only enrolled for one class during the year, hence the former person should be counted ten times, not merely once.

6. Another frequent concern noted by recorders was a definite lack of operational recording systems for intramural and physical education classes in their schools prior to the beginning of the study. Many recorders indicated that their schools "just don't keep that kind of record." This again was especially true in the larger institutions with comprehensive programs.

Mid Survey Meeting

A meeting was held in November 1975 with experts in the field of athletic injuries from national professional associations, institutions of higher education, Federal agencies, researchers in the field, and other concerned individuals. This meeting had two main goals: first, to examine the table shells proposed for this survey to make sure that they used the available data in the most advantageous way and, second, to discuss the range of options for recommendations which might result from the survey.

Survey Mailings

During the course of the survey, several mailings were sent to the State school and college coordinators to help make sure that they recalled the survey, were working on it, and to let them know that their work was important. Beyond that, because only a final report was required, there was

no way that the survey staff knew if the information was being collected and the school respondent was correctly following the instructions. The fact that many questions were received from individual institutions, however, was reasurring as it confirmed the fact that data were being gathered.

Illustrative of the mailings during this period was one sent in the spring of 1976 which clarified frequently expressed concerns, and reminded institutions that the form was due on June 30, 1976. Another survey form was included in this mailing to preclude delays for those who misplaced the form sent earlier.

Editing Procedures

The procedures established for handling of incoming survey forms began with recording the date of receipt of the form in the master file. From this point, the following steps took place:

1. Check for contact person's name and telephone number. This would be utilized if any followup was needed to resolve errors.
2. Check if data were complete for each category of activity (i.e., if participants were listed, then injury columns must be completed, and vice versa).
3. Check the presence or absence of the health care person against the listing of the principal person responsible for handling injuries at each institution.
4. Check frequencies listed in the respective categories for apparent unrealistic or inconsistent expressions warranting followup.
5. Check the item indicating whether a death occurred and if so, verify by direct contact the accounting of the circumstances.

Many potential editing trouble spots within the survey form were isolated prior to the end of the recording period. Errors within the survey reports that arrived too early to be included in the data were found to be typical of the forms received later. By reviewing these forms closely, the survey staff prepared for the manual edit well in advance.

Several consistent problems occurred in about half of the total number of forms. When recorders would leave categories blank, it was usually impossible for the editor to know whether the blanks indicated zeros, no program in this area, or oversights in recording. Concern over the interpretation of blanks was directly responsible for the majority of the followup phone calls. This problem was anticipated and cited in the earlier spring memo emphasizing the need for completing each category with appropriate data (including zero's) or indicating its non-applicability.

Survey reports submitted on obsolete forms provided the second most common reason for initiating followup phone calls. Recorders, who grouped intramural and physical education programs together, were contacted and asked to separate their data into two distinct groups according to the respective procedures. Survey staff transferred the resulting data to the proper forms for the recorders to expedite matters. Most of those individuals contacted were able to successfully sort their data; however, some were unable to retrieve their information, and these portions of their reports were coded (utilizing asterisks as opposed to blanks or zero's) as uninterpretable information.

Other patterns of errors within incoming report forms included having participant categories completed but the injury section left blank and (vice versa), injury frequencies listed in the participant sections, absence of attention given to intramurals or physical education (especially at the college level), and general misinterpretation of the individual headings within the survey form. Each time the editor was unable to account for a completed form, the report was slated for followup procedures. Later, forms were machine edited to identify data gaps and inconsistencies.

Followup

Followup procedures involved personal telephone calls from the survey staff to institutional recorders. These calls were made as soon after editing as possible in order to talk with recorders while information was fresh in mind. The vast majority of these calls were met with pleasant cooperation and concern for data accuracy. However, the survey staff found it especially difficult, at least at the secondary level, to contact the original recorder due to summer vacations. These forms were set aside and scheduled for followup in September.

According to established policy, each error correction was handled directly by telephone. If after the first call, the information was not obtained for any reason, a second call was scheduled for the next week. If after the second call the report was still incomplete, a third call was scheduled. As the data collection phase of the survey neared its end, the particular portion of those forms which were still incorrect after three attempts to contact them by telephone were coded as uninterpretable data and

submitted for key punching. The results which spanned a six-month period are:

Telephone information followup	Individuals called	
	Number	Percent
Total	1166	100
Completed 1st call	610	52
Completed 2nd call	162	14
Completed 3rd call	365	31
Incompleted after 3 calls	29	3

Concern was expressed over the designation of "principal person responsible for treating injuries." If a school checked "coach," it was questioned whether that coach met the requirements to be recorded legitimately as "athletic trainer or other health person immediately available." To assess this concern, a sample of forms which had checked the category "coach" was selected for followup phone calls. They were asked if their coach met the "other health person" requirement. The results are shown below:

Telephone information followup	Individuals called	
	Number	Percent
Total	456	100
Yes	174	38
No	213	47
For some sports	46	10
Unknown	23	5

Although half of these individuals indicated that their coach did not meet the criteria for "other health care person," no alteration could be made by the survey staff of that school's data.

Once forms were completed, a mailing label, which included the institution's code numbers, was attached to each institution's report. This was to facilitate accuracy in keypunching the institution's identification. In addition to labels, the forms were sorted by state and level (secondary/college). These forms were keypunched, verified, and entered onto computer tape for machine editing.

The response rate forced a delay in reporting the results of the survey. On September 1, 1976, replies were received from 43 percent of the secondary schools and 53 percent of the colleges. While an acceptable rate for some surveys, this was not acceptable for a NCES study, where a sample of institutions was used to develop State and national estimates. As a result, the decision was made to keep the survey open for several more months and to use intensive letter and telephone followup procedures to increase the response rate. This was done and the response rate for secondary schools was increased to 60 percent and the rate for colleges to 79 percent. While it delayed the reporting of the results of the survey, this followup activity added considerably to the reliability of the results.

The calls related to the response rate also provided an additional opportunity for dialogue with respondents in individual institutions. A frequent comment was the high degree of difficulty in gathering injury data from intramural and physical education programs. Some felt that with more lead time, they might have done a better job. One collegiate coordinator questioned the validity of his institution's data because of the lack of cooperation received from fellow staff members asked to contribute information. Some institutions, reportedly, had no troubles. Consider one secondary school's report of over 4,000 participants in a wide variety of athletics (including 100 athletes in tackle football), intramurals, and physical education. When it came to injuries, none were recorded. Upon contact with the recorder, the editor was reassured that no injuries occurred throughout the entire year. There were several other instances of a similar nature. On the other hand, the requirements of the survey brought conscious attention to the absence of accurate injury records and thereby stimulated some institutions to develop and maintain a program-wide injury recording system.

Another encouraging note was the personal interest shown by many of the coordinators in the survey. Many are clearly concerned about making athletics as safe as possible and welcomed this survey which sought to provide data on injuries as an aid to improved planning for the future.

Additional delay was caused by the quality of the data. Any first-time survey has data problems and this was both a new survey and one gathering data in a new area. When the forms were reviewed, and manual editing took place, numerous errors were found. Illustrative were schools which reported athletic injuries for women in intercollegiate football but reported on another part of their form that

only men were participating in that sport. Other institutions omitted responses to whole sections of the form. These potential errors or data omissions required extensive recontact with institutions and additional editing time. As a result, the processing of forms from the survey was slower than anticipated.

Furthermore, expeditious processing of results of the survey was limited by the maximum of $75,000 placed on monies which could be spent on this project. A small contract to program the necessary tables, for example, proved unsuccessful because the funds ran out before the work could be satisfactorily completed.

For these and other reasons, months of work were required to get the survey results into a fully-edited and useable format. The net result is that reporting of the results of this survey took much longer than anticipated. It was not until March 1978 when the final tables became available that the report could be prepared.

Appendix B
INDIVIDUALS CONSULTED DURING SURVEY

The following persons were contacted during the course of planning and implementing the survey. The listing of their name, of course, in no way implies that they accept or reject the report and its conclusions.

American Alliance for Health, Physical Education, and Recreation

Gordon Jeppson
Alma Beale

American College Health Association

James W. Dilley
Samuel I. Fuenning

American College of Sports Medicine

Clayton Thomas

American Group Practice Association

Alexandra W. Cook

California Athletic Injury Survey

Frank B. Jones

Cleveland Clinic Foundation

John Bergfeld

Congressional Staff

George Mannina
Christopher Cross
Jack Jennings
Nick Edes
Kenneth Ludden

Committee on Evaluation and Information Systems of the Council of Chief State School Officers

Edward R. Allen, Jr.
Jerry T. Barton
James Mitchell
Jack Conway
Charles Sisson
Lee R. Wolfe
Paul Fillion

National Association for Girls and Women in Sports

Karen Johnson

National Association for Intercollegiate Athletics

Robert Livingston

National Association of Collegiate Athletic Directors

Leo Miles

National Association of State High School Associations

David Arnold

National Athletic Injury/Illness Reporting System (NAIRS)

Kenneth S. Clarke
John W. Powell
Sayers J. Miller

National Athletic Trainers Association

Frank George
Ted Quendenfeld
Bobbie Gunn

National Bureau of Standards, Center for Consumer Product Technology

Peter Finkel
William Beine
Eugene McDowell
John Donaldson
M. W. Greenough

National Center for Health Statistics

Ethel Black
Peter Ries
David Hoover

National Collegiate Athletic Association

Carl Blyth

National Junior College Athletic Association

Kermit Smith

National Safety Council

Ben Harris

President's Council on Physical Fitness and Sports

Ash Hayes

University of Washington, Division of Sports Medicine

James Garrick

U.S. Consumer Product Safety Commission

Victoria R. Brown
Al Esch

Appendix C
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Appendix D
SURVEY LETTERS AND FORMS

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE ASSISTANT SECRETARY FOR EDUCATION
WASHINGTON, D.C. 20202

December 30, 1974

Dear College President:

The Congress has expressed concern about the number of students injured or killed participating in athletic events. Some experts feel that if every college athletic activity had an athletic trainer or other health person in attendance the effects of athletic injuries would be reduced in severity.

To learn more about the number of injuries and the type of health service treatment available, Congress by Public Law 93-380 directed the Secretary to make a full and complete investigation and study of athletic injuries and deaths in secondary schools and institutions of higher education. A copy of Section 826 of P.L. 93-380, enacted August 21, 1974, is enclosed for your information. The law is very specific in requiring a report on this survey early in 1976 and coverage of a full school year. Preliminary plans for this survey were discussed at the meeting of the Higher Education General Information Survey Conference on September 13.

The study will be based upon a sample of institutions. Your college or university was selected as representative of a number of similar institutions so your participation is particularly important.

Pursuant to the provisions of Section 826 (b) of Public Law 93-380, we request that you maintain appropriate records to enable you to compile information under Section 826 (a), and we further request that you submit such information to me immediately after October 20, 1975.

At this time, we request that you nominate a coordinator for this survey for your institution. Please let us know who will be serving as coordinator including name, title, and telephone number of your designee. We suggest use of the enclosed envelope to facilitate your reply.

The survey form will be kept as simple as feasible to comply with the law. A copy will be sent to the person designated by you as coordinator for your institution, along with instructions for recordkeeping and reporting.

We have assigned responsibility for this study to the National Center for Education Statistics. Dr. Robert Calvert, Jr., Chief of Adult and Vocational

Education Surveys, will have primary responsibility for conducting this special survey. He may be addressed as follows: Adult and Vocational Education Surveys, Room 2175, 400 Maryland Avenue, S.W., Washington, D.C. 20202. His phone number is 202-245-8340.

The serious implications of athletic injuries make this study an important one. The cooperation of your school is essential if we are to determine the total impact of injuries and deaths in athletics.

Sincerely,

Virginia Y. Trotter

Virginia Y. Trotter
Assistant Secretary
for Education

Enclosures (2)
1. Copy of Section 826 of PL 93-380
2. Return envelope

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE ASSISTANT SECRETARY FOR EDUCATION
WASHINGTON, D.C. 20202

Dear Chief State School Officer

The Congress has expressed concern about the number of students injured or killed participating in athletic events. Some experts feel that if every school athletic activity had an athletic trainer or other health person in attendance the effects of athletic injuries would be reduced in severity.

To learn more about the number of injuries and type of health service treatment available, Congress by Public Law 93-380 directed the Department to make a full and complete investigation and study including a special survey of athletic injuries and deaths in secondary schools and institutions of higher education. A copy of Section 826 of P.L. 93-380, enacted August 21, 1974, is enclosed for your information. The law is very specific in requiring a report on this survey early in 1976 and coverage of a full year. Preliminary plans for this survey were reviewed by the Subcommittee on Mandatory Studies of the Committee on Educational Information Systems of the Council of Chief State School Officers on September 19. Before the survey form is finalized, it will be coordinated with the Subcommittee.

The study will be based upon a sample of secondary schools, both public and private, and colleges. The actual content of the form will be kept as simple as feasible to comply with the law. A copy of the form and a list of sample schools will be sent to the person designated by you as coordinator for your State, along with instructions for recordkeeping and reporting.

Pursuant to the provisions of Section 826 (b) of Public Law 93-380, we request that schools in your State maintain appropriate records to enable them to compile information under Section 826 (a), and we further request that such information be submitted to me immediately after October 20, 1975.

We have assigned responsibility for this study to the National Center for Education Statistics. Dr. Robert Calvert, Jr., Chief of Adult and Vocational Education Surveys, will have primary responsibility for conducting this special survey. He may be addressed as follows: Adult and Vocational Education Surveys, Room 2175, 400 Maryland Avenue, S.W., Washington, D.C. 20202. His telephone number is 202-245-8340.

At this time, we request that you designate a coordinator for the survey for your State or other area. Please let us know who will be serving as coordinator including name, title, and telephone number of your designee. We suggest use of the enclosed envelope to facilitate your reply. We will contact the coordinator to learn whether the mailings to schools should go through your office or directly to the institutions selected in the sample.

The serious implications of athletic injuries make this survey an important one. The cooperation of your State is essential if we are to determine the total impact of injuries and deaths in athletics.

Sincerely,

Virginia Y. Trotter

Virginia Y. Trotter
Assistant Secretary
for Education

Enclosures (2)
1. Copy of Section 826 of P.L. 93-380
2. Return envelope

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE ASSISTANT SECRETARY FOR EDUCATION
WASHINGTON, D.C. 20202

June 10, 1975

NATIONAL CENTER FOR EDUCATION STATISTICS

TO: College Coordinators, Athletic Injury Survey

As you will probably recall, you were nominated by the President of your institution to serve as coordinator for the survey of athletic injuries and deaths. This is a mandated study requested by Congress through Public Law 93-380 and is designed to provide a basis for better planning to reduce the effect of injuries in athletics.

This study is based upon a sample of institutions. Your college or university was selected as representative of a number of colleges or universities so that your participation is particularly important.

During the past few months, a number of coordinators have written or called regarding the survey. We regret that it has not been possible until now to provide you with information regarding the survey. Now, the forms have been developed, approved, and the details of the study may be communicated.

Enclosed you will find several forms to be used in connection with this survey.

The first is a form to be completed at the end of the survey period. The survey is to be based upon the 12-month period, June 1, 1975 to June 30, 1976. Note that this includes any college-sponsored activities which occur during the summer of 1975 including, if applicable, pre-school football practice. This form should be returned by June 30, 1976 (or earlier, if your athletic activities for the 1975-76 school year have ended).

The second is a two-page worksheet. Its use is optional and it is intended solely to simplify data acquisition. The first page of the worksheet is designed as an aid in developing the necessary totals for athletic participants as requested on the survey form. The second page is intended to be used as a running log on which injuries may be recorded. For larger institutions, several copies of this running log form are provided. If you need more, either reproduce them locally or let us know and we will send them to you.

We are contracting with the National Athletic Injury Reporting Service (NAIRS) at Penn State University to work with us on the processing and interpretation of information from this study, and you may be contacted by NAIRS during the course of the year.

Please let us know if you have any questions about this survey. For your records, our telephone number in Washington is 202-245-8340. The telephone number at NAIRS is 814-865-9543.

Your cooperation in this important national study will be very much appreciated.

Robert Calvert, Jr.
Project Coordinator

Enclosures

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE ASSISTANT SECRETARY FOR EDUCATION
WASHINGTON, D.C. 20202

NATIONAL CENTER FOR
EDUCATION STATISTICS

TO: School Administrator

Congress has expressed concern about the number of students injured or killed participating in athletic events. Some experts feel that if every team or school had an athletic trainer or other health person in attendance the effects of athletic injuries would be reduced in severity.

To learn more about the numbers of injuries and the type of health service treatment available, Congress by Public Law 93-380 directed that a survey be made of athletic injuries and deaths in secondary schools and in colleges and universities. Participation in this survey is encouraged by the National Federation of State High School Associations. This study will be based upon a sample of institutions. Your school was selected as representative of a number of institutions so that your participation is particularly important.

Enclosed you will find several forms to be used in connection with this survey.

The first is a School Contact Nominee Form. This should be completed by providing the name of the person in your school who will be responsible for this study. Please return this immediately in the envelope provided for this purpose.

The second is a form to be completed at the end of the survey period. The survey uses the year July 1, 1975 to June 30, 1976. Note that this includes any school sponsored activities which occur during the summer of 1975 including, if applicable, pre-school football practice. This form should be returned by June 30, 1976 (or earlier, if your athletic activities for the 1975-76 school year have ended).

The third is a two-page worksheet. It's use is optional and is intended solely to help simplify data acquisition. The first page of the worksheet is designed as an aid in developing the necessary totals for athletic participants as requested on the survey form. The second page is intended to be used as a running log on which injuries may be recorded. Only one copy of this second page is being sent with this letter. Additional copies of the running log form will be sent as soon as they come from the printer.

We have contracted with the National Athletic Injury Reporting Service (NAIRS) at Penn State University to work with us on the processing and interpretation of information from this study, and you may be contacted by NAIRS during the course of the survey year.

Please let us know if you have questions about this survey. For your records, our telephone number in Washington is 202-245-8340. The telephone number at NAIRS is 814-865-9547

Your cooperation in this important national study will be very much appreciated.

Sincerely,

Robert Calvert, Jr.
Project Coordinator

Enclosures

REPRODUCTION OF NOMINEE FORM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
EDUCATION DIVISION
WASHINGTON, D.C. 20202

SURVEY OF ATHLETIC INJURIES AND DEATHS

SCHOOL CONTACT NOMINEE

OMB NO. 51-S74053
APPROVAL EXPIRES: 12/31/76

INSTITUTIONAL IDENTIFICATION

MAKE ANY CHANGES IN THE NAME OR ADDRESS OF THE SCHOOL ON THE LABEL TO THE LEFT.

CONTACT PERSON ASSIGNED BY THIS INSTITUTION TO THIS SURVEY

NAME	TITLE	TELEPHONE	
		AREA CODE	NUMBER

SIGNATURE OF PERSON PREPARING THIS FORM	TYPE NAME AND TITLE

RETURN COMPLETED FORM TO:

OE FORM 2375-1, 5/75

REPRODUCTION OF SURVEY REPORT FORM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
EDUCATION DIVISION
WASHINGTON, D.C. 20202

SURVEY OF ATHLETIC INJURIES AND DEATHS (Report Form)

FORM APPROVED
O.M.B. NO. 51-S74083

INSTITUTIONAL IDENTIFICATION

Please use this form to report on injuries or deaths occurring in your athletic program during the period from July 1, 1975 to June 30, 1976. An extra copy of the form is provided for your records. Submit the form to the coordinator (in the envelope provided) by July 5, 1976. If your school year is over, and all athletic activities are completed before June 30, 1976, submit the form then.

DEFINITIONS. The following definitions are to be used in responding to this survey:

Athletic or athletic activities are varsity, club, and intramural sports (including physical education classes) that are organized, sponsored, or approved by the school (school district) or institution of higher education for its students, male and/or female. Secondary schools should only include activities dealing with grades 10 to 12 (or 9 to 12, if your school is organized that way).

Athletic activities are to be classified in three groups:

1. Athletic competition between schools (intercollegiate and club sports)
2. Practice for athletic competition
3. Other (intramurals and physical education classes)

Sports categories include the following three groups:

1. Tackle football, only
2. Other contact sports, including baseball, basketball, boxing, field hockey, touch and other football (except tackle), ice hockey, judo, lacrosse, rodeo, rugby, soccer, softball, water polo, wrestling.
3. Noncontact sports, including archery, badminton, bowling, crew, cross country, curling, fencing, golf, gymnastics, riflery, skiing, squash, swimming/diving, tennis, track, and volleyball.

Participants should include students enrolled in grades 10 to 12 in secondary schools (or 9 to 12, if your school is organized that way) and all students enrolled in colleges and universities.

For physical education classes, report the total number of students ever enrolled *(the unduplicated count of individuals)* during the year.

Injuries to be reported in this survey should have resulted directly from one of the above types of athletic activities. List each injury only once, in either or the following two categories.

MINOR/MODERATE INJURIES. Are those which result in the participant missing the athletic activity (whether competition, practice, or instruction) or scheduled academic activities or would have missed it (had it been scheduled) from one to twenty days following the day of onset of the injury.

SEVERE INJURIES. Are those which result in the participant missing the three or more weeks of scheduled practice or athletic or academic activities following the date of onset of the injury.

NOTE: For injuries which occur at the end of a sports season, respond on the basis of the time which the participant would have missed had the season been continuing.

With athletic trainer or other health person immediately available refers to the availability of a person professionally qualified to provide immediate treatment of athletic injuries. If not actually present on the site, the person must have been capable of attending to the stricken participant within five minutes.

1. TOTAL NUMBER OF PARTICIPANTS IN YOUR ATHLETIC AND SPORTS PROGRAM DURING THE PERIOD JULY 1, 1975 TO JUNE 30, 1976. DUPLICATE COUNTS SHOULD BE USED: COUNT EACH STUDENT ONCE FOR EACH INTER-SCHOOL COMPETITIVE SPORT IN WHICH THE STUDENT PARTICIPATES, IN THE FIRST SECTION BELOW; AND COUNT EACH STUDENT ONCE FOR EACH SPORT IN WHICH HE/SHE PARTICIPATES IN INTRAMURAL PLAY OR IN PHYSICAL EDUCATION CLASSES, IN THE SECOND SECTION

A. COMPETITIVE	NUMBER (a) MALE	(b) FEMALE	B. INTRAMURALS	NUMBER (c) MALE	(d) FEMALE
(1) TACKLE FOOTBALL ONLY			(1) TACKLE FOOTBALL ONLY		
(2) OTHER CONTACT SPORTS			(2) OTHER CONTACT SPORTS		
(3) NON-CONTACT SPORTS			(3) NON-CONTACT SPORTS		
(4) *RESERVED FOR EDUCATION DIVISION USE*			C. PHYSICAL EDUCATION CLASSES		

2. INDICATE THE PRINCIPAL PERSON RESPONSIBLE FOR PREVENTING AND TREATING ATHLETIC INJURIES AT YOUR INSTITUTION *(check the first applicable)*

A. ☐ ATHLETIC TRAINER, NATIONAL ATHLETIC TRAINERS ASSOCIATION, CERTIFIED OR ASSOCIATE MEMBER
B. ☐ ATHLETIC TRAINER, OTHER
C. ☐ COACH OR ASSISTANT COACH
D. ☐ SCHOOL NURSE
E. ☐ STUDENT ASSISTANT *(specifically trained)*
F. ☐ OTHER *(specify)*
G. ☐ NONE

PERSON COMPLETING THIS FORM

NAME	TITLE	TELEPHONE AREA CODE	TELEPHONE NUMBER

INSTITUTION *(if different from above)*

NAME	ADDRESS *(include complete mailing address, street, city, State, and ZIP code)*

OE FORM 2375-2, 11/75 REPLACES OE FORM 2375-2, 5/75, WHICH IS OBSOLETE *(continued on reverse)*

3. INJURIES

ATHLETIC ACTIVITY	WITH ATHLETIC TRAINER OR OTHER HEALTH PERSON PRESENT OR IMMEDIATELY AVAILABLE AT TIME OF INJURY		WITHOUT ATHLETIC TRAINER OR OTHER HEALTH PERSON PRESENT OR IMMEDIATELY AVAILABLE AT TIME OF INJURY	
	(a) MALE	(b) FEMALE	(c) MALE	(d) FEMALE
A. ATHLETIC COMPETITION BETWEEN SCHOOLS				
(1) TACKLE FOOTBALL, MINOR/MODERATE				
(2) TACKLE FOOTBALL, SEVERE				
(3) OTHER CONTACT SPORTS, MINOR/MODERATE				
(4) OTHER CONTACT SPORTS, SEVERE				
(5) NON-CONTACT SPORTS, MINOR/MODERATE				
(6) NON-CONTACT SPORTS, SEVERE				
(7) *RESERVED FOR EDUCATION DIVISION USE*				
B. ATHLETIC PRACTICE FOR COMPETITION				
(1) TACKLE FOOTBALL, MINOR/MODERATE				
(2) TACKLE FOOTBALL, SEVERE				
(3) OTHER CONTACT SPORTS, MINOR/MODERATE				
(4) OTHER CONTACT SPORTS, SEVERE				
(5) NON-CONTACT SPORTS, MINOR/MODERATE				
(6) NON-CONTACT SPORTS, SEVERE				
(7) *RESERVED FOR EDUCATION DIVISION USE*				
C. INTRAMURALS				
(1) TACKLE FOOTBALL, MINOR/MODERATE				
(2) TACKLE FOOTBALL, SEVERE				
(3) OTHER CONTACT SPORTS, MINOR/MODERATE				
(4) OTHER CONTACT SPORTS, SEVERE				
(5) NON-CONTACT SPORTS, MINOR/MODERATE				
(6) NON-CONTACT SPORTS, SEVERE				
D. PHYSICAL EDUCATION CLASSES				
RESERVED FOR EDUCATION DIVISION USE				

4. DEATHS *(For any deaths, describe in Item 5, sport involved, sex of student, circumstances, diagnosis of cause of death, and type of health person in attendance, if any.)* If no deaths occurred during the reporting period, enter "X" here. → ☐

5. COMMENTS

REPRODUCTION OF WORKSHEET FORM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
EDUCATION DIVISION

SURVEY OF ATHLETIC INJURIES AND DEATHS
SCHOOL WORKSHEET (Optional)

OMB NO. 51-S74053
APPROVAL EXPIRES: 12/31/76

Use of this worksheet is optional. It may be used to aid in totalling the number of male and female students participating in various kinds of athletic activities (to provide the totals requested in Item 1 of the report form). It also may be used to record injuries as they occur (to be used in developing the totals requested in Item 3 of the report form).

The worksheet, if used, need not be submitted. The only report necessary is the summary form, to be submitted at the end of the 12-month reporting period (June 30, 1976, or earlier if the school year is over and all athletic activities have ceased).

MAJOR SPORTS ACTIVITIES	NUMBER OF PARTICIPANTS		MAJOR SPORTS ACTIVITIES	NUMBER OF PARTICIPANTS	
	MALE	FEMALE		MALE	FEMALE
A. TACKLE FOOTBALL - TOTAL			C. NON-CONTACT SPORTS ARCHERY		
B. OTHER CONTACT SPORTS BASEBALL			BADMINTON		
BASKETBALL			BOWLING		
BOXING			CREW		
FIELD HOCKEY			CROSS COUNTRY		
FOOTBALL *(except tackle)*			CURLING		
ICE HOCKEY			FENCING		
JUDO			GOLF		
LACROSSE			GYMNASTICS		
RODEO			RIFLERY		
RUGBY			SKIING		
SOCCER			SQUASH		
SOFTBALL			SWIMMING DIVING		
WATER POLO			TENNIS		
WRESTLING			TRACK AND FIELD INDOOR		
OTHER *(specify)*			TRACK AND FIELD, OUTDOOR		
			VOLLEYBALL		
			OTHER *(specify)*		
			NON CONTACT SPORTS - TOTAL		
OTHER CONTACT SPORTS-TOTAL			D. INTRAMURALS - TOTAL		
			E. PHYSICAL EDUCATION CLASSES - TOTAL		

OE FORM 2375-3, 5 75

OMB NO. 51-S74053, APPROVAL EXPIRES: 12 31 76

RUNNING LOG OF INJURIES AND THEIR CLASSIFICATION

PAGE NUMBER | NUMBER OF PAGES

STUDENT IDENTIFICATION (Use this column in any way desired)	SEX OF STUDENT		TYPE OF SPORT			TYPE OF ACTIVITY			DATE OF INJURY	WAS TRAINER OR OTHER HEALTH PERSON AVAILABLE?		DATE RETURNED OR COULD HAVE RETURNED TO ATHLETIC ACTIVITY	CLASSIFICATION OF INJURY	
	M	F	FOOTBALL	OTHER CONTACT	NON-CONTACT	COMPETITION BETWEEN SCHOOLS	PRACTICE FOR COMPETITION	OTHER ACTIVITIES		YES	NO		MINOR/MODERATE (missed or could have missed at least one day's activities not including date of injury)	SEVERE (missed three weeks or more of activity)

OE FORM 2375-3, 5 75

PENN STATE SPORTS RESEARCH INSTITUTE

CENTER FOR HEALTH ASPECTS OF SPORTS

We understand that your institution is among the national sample of nearly 4,000 schools and colleges co-operating in the HEW Study of Athletic Injuries and Deaths, mandated by PL 93-380, Sect 826 (the "Forsythe Amendment"). We trust that you have begun recording the injuries which are reportable. HEW has contracted with Penn State University to assist in the preparation of the survey data for analysis and interpretation. This will be done by the staff of the National Athletic Injury/Illness Reporting System (NAIRS) which is housed at Penn State. This HEW survey, however, should not be confused with ongoing NAIRS system.

As you have learned from HEW's forms forwarded to you earlier, the law required HEW to follow injuries occuring in intramurals and physical education as well as varsity and club sports for one academic year, starting July 1, 1975. The forms were designed to make it as easy as possible to provide the required information. Nonetheless, difficulties will exist; a variety of questions may arise.

For example, one anticipated question is the definition of "Other Health Person." This is limited to physicians, nurses, and those who are currently certified in both Advanced First Aid and Emergency Care (Red Cross) and Cardio-Pulmonary Resuscitation (Red Cross or American Heart Association) and who are available to the athletic or physical education program in some planned manner.

Further, HEW is modifying its OE form 2375-2 "Survey of Athletic Injuries and Deaths (Report Form)" to separate the peculiarities of physical education from intramurals. You no longer will be asked to provide participation totals in physical education categorically by Tackle Football, other Contact Sports, and Non-Contact Sports. The revised forms will instead ask for the number of individual students who had been enrolled in physical education during the year of the survey. No student should be counted more than once no matter how many times he or she was in different classes. A similar change will be made on the back of the form with respect to the listing of injuries experienced. There will be but one category for recording physical education injuries.

One of our key tasks is to enhance uniformity in interpretation of the forms. Consequently, please contact your state co-ordinator for this survey with any concern you may have. Thank you for your assistance in meeting the survey's expectations.

Kenneth S. Clarke, Ph.D.
Project Director

Sayers J. Miller, Jr., RPT, ATC
Project Co-ordinator

John W. Powell, ATC
Project Expediter

The Pennsylvania State University Sports Research Building University Park, Pa. 16802 814 865-9543

PENN STATE SPORTS RESEARCH INSTITUTE

CENTER FOR HEALTH ASPECTS OF SPORTS

A. HEW - PSU

Administrative Policies

1. What is the role of PSU in the HEW Athletic Injury Survey?

   ANS To assist HEW in the collection and interpretation of the survey data and to provide to the sample schools information regarding the use of the HEW forms.

2. Do individual schools mail directly to PSU?

   ANS All college and Junior colleges mail directly to Penn State. High schools, with active state coordinators, will mail the forms to the state office. In states without active coordinators, schools will mail directly to Penn State.

3. Who designed the forms being used?

   ANS HEW

4. Who will present final reports to Congress?

   ANS Secretary of HEW

5. Will the state coordinators receive copies of the final report?

   ANS Yes, after HEW has presented it to Congress.

6. What if a school does not wish to continue as a member of the sample?

   ANS HEW will be notified and they will deal with the problem.

7. Why was the original form revised?

   ANS The revision was necessary in order to accomodate the pecularities of physical education programs. The change will facilitate ease of classification by the recorder.

8. Has CEIS and OMB approved the revised form?

   ANS All forms have been approved by both agencies.

9. Can one high school be substituted for another if they are in the same system?

   ANS No. Each school is chosen as part of the representative sample.

10. Will the schools have access to data from other schools?

    ANS No, not specifically. They will only know how their school relates to the entire sample.

The Pennsylvania State University Sports Research Building University Park, Pa. 16802 814 865-9543

B. Interpretation of Forms

1. In the case of a multi-campus college, how are total participants counted?

   ANS The school only counts those individuals involved on the main campus.

2. Where are injuries to students, who are participating in student-faculty competition, recorded?

   ANS Under the category Intramurals.

3. Where are injuries from varsity and club sports inter-squad scrimmage recorded?

   ANS Under the category Practice for Competition.

4. Where are sports not listed in the definitions recorded?

   ANS If an injury were to occur, the sport should be included in the category that it most closely resembles, i.e. Team Handball would be a contact sport.

5. What if "health care person" was available but not involved (needed)?

   ANS It should be recorded as if he were available.

6. How should a death be handled?

   ANS It should be recorded separately under Section 5, Comments and an explanation given of how it occurred. The explanation should include age, sex, sport, detailed description of the circumstances and procedures used for immediate care.

7. Can NAIRS forms be substituted for HEW forms?

   ANS No. However, the NAIRS forms can be used to supply the information to the HEW forms.

C. Definitions of Terms

1. How are total participants in physical education classes (both high school and college) determined?

   ANS Each individual who is enrolled in physical education classes during the school year is counted as ONE, no matter how many different times he is enrolled. No one is counted twice.

2. How are totals for Varsity and Club Sports participants determined?

   ANS Total participants should be a number representative of the normal size of the squad. An approximate time for counting might be two weeks into the season. However, any injuries occurring during the two weeks should be recorded. An individual should be counted each time he is listed as a member of any squad.

3. How are Physical Education classes distinguished from Intramurals Varsity and Club Programs?

   ANS Physical Education Classes are defined as any activity that occurs as part of the regular school program and where participants receive credit for their work.

   Intramurals are school sponsored programs in which competition among students is voluntary and the teams compete against other teams within their own schools.

   Varsity and Club Sports are school sponsored programs for which there is competition against teams from other areas.

4. What is the definition of Other Health Care Person?

   ANS This category includes physicians, nurses, emergency medical technicians and those who are currently certified in both Advanced First Aid and Emergency Care (Red Cross) and Cardio-Pulmonary Resuscitation and who are available to the athletic or physical education programs in some planned manner.

PENN STATE SPORTS RESEARCH INSTITUTE

CENTER FOR HEALTH ASPECTS OF SPORTS

TO: State and Institution Coordinators of the HEW Survey of Athletic Injuries and Deaths

RE: Approval of Revised Form OE 2375-2 "Survey of Athletic Injuries and Deaths (Report Form)

In our first communication with you concerning the Survey, we indicated that the form OE 2375-2 "Survey of Athletic Injuries and Deaths (Report Form)" was in the process of being modified to simplify the reporting process for physical education injuries. Two changes in the form were proposed. These revisions have now been reviewed favorably by both the Federal Office of Management and Budget and the Council of Chief State School Officers Committee on Education Data Systems.

The first change clarifies how many times participants in physical education are to be counted. The change in the form will indicate that students are to be counted only once for the year, rather than each time that they register.

The second change eliminates the need under physical education to classify details by type of activity (football, other contact, and non-contact sports). Students participate in a wide range of activities within physical education classes, and the counts would be so inflated that it was considered better to ask only for total participants in physical education classes during the year and the total number of injuries experienced by them.

In the near future, Washington will be sending the revised form to each State Coordinator (where the State is handling distribution or to each Institution Coordinator (where that procedure is being followed) The intent of this memo is to confirm the approval of the changes and to advise you to destroy the original form to avoid error next June.

Please let us know at any time of any question you may have regarding the survey's requirements.

Kenneth S. Clarke, Ph.D.
Project Director

Sayers J. Miller, Jr., RPT,ATC
Project Coordinator

John W. Powell, ATC
Project Expediter

The Pennsylvania State University Sports Research Building University Park, Pa. 16802 814 865-9543

PENN STATE SPORTS RESEARCH INSTITUTE

CENTER FOR HEALTH ASPECTS OF SPORTS

TO: Coordinator for the HEW Survey of Athletic Injuries and Deaths

FROM: John W. Powell, Project Expediter

RE: Year-end Compliance

The academic year defined by the HEW Survey of Athletic Injuries and Deaths is rapidly drawing to a close. Enclosed is another form for your convenience. Based upon questions received from a variety of sources the following suggestions are offered in order to assist your reporting of participants and injuries accurately. Please:

1. If a particular section of the form does not apply to your institution please indicate not applicable. Do not leave it blank.

2. Read carefully all definitions and the respective counting procedures for athletics and physical education classes.

3. On question 2, check only the one box that is most appropriate for your institution.

4. Be sure to include your telephone number at the bottom of page 1.

5. Read directions for question 4 ("Deaths") carefully. If no death occurred, check the box provided.

6. DO NOT MAIL THE FORMS TO H.E.W. Forms should be mailed to your State Coordinator as soon as your school's athletic year is completed. If you sponsor athletic programs, including physical education and intramurals through the summer months, remember that the reporting period is through 30 June, 1976 and the forms are due by 5 July, 1976. However, please do not wait until June 30 if your athletic program is over earlier.

7. If you have any comments on the survey on athletic injuries, have suggestions to make in this area, or have tried any innovations, please share them with us.

As before, if you have any problems, please contact your state coordinator. Thank you for your cooperation throughout the program.

JWP:jo

The Pennsylvania State University Sports Research Building University Park, Pa. 16802 814 865-9543